



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

Educ T 129.20.898

Harvard University



LIBRARY OF THE
Graduate School of Education

COLLECTION OF TEXT-BOOKS

CONTRIBUTED BY THE PUBLISHERS

TRANSFERRED

TO

HARVARD COLLEGE
LIBRARY



3 2044 097 059 653

A

Social Science Text-Books

EDITED BY RICHARD T. ELY

AMERICAN MUNICIPAL PROGRESS

SOCIAL SCIENCE TEXT-BOOKS

EDITED BY RICHARD T. ELY

OUTLINES OF ECONOMICS

**By RICHARD T. ELY, PH.D., LL.D. Revised and
enlarged by the AUTHOR and THOMAS S. ADAMS,
PH.D., MAX O. LORENZ, PH.D., ALLYN A.
YOUNG, PH.D.**

OUTLINES OF SOCIOLOGY

**By FRANK W. BLACKMAR, PH.D., and JOHN LEWIS
GILLIN, PH.D.**

HISTORY OF ECONOMIC THOUGHT (Revised Edi- tion)

By LEWIS H. HANKEY, PH.D.

BUSINESS ORGANIZATION AND COMBINATION

By LEWIS H. HANKEY, PH.D.

PROBLEMS OF CHILD WELFARE

By GEORGE B. MANGOLD, PH.D.

SOCIAL PROBLEMS

By EZRA T. TOWNE, PH.D.

THE NEW AMERICAN GOVERNMENT

By JAMES T. YOUNG, PH.D.

COMPARATIVE FREE GOVERNMENT

By JESSE MACY, LL.D., and JOHN W. GANNAWAY, M.A.

AMERICAN MUNICIPAL PROGRESS

By CHARLES ZUEBLIN.

APPLIED EUGENICS

By PAUL POPENOK and ROSWELL S. JOHNSON, M.S.

AGRICULTURAL ECONOMICS

By HENRY C. TAYLOR, M.S. AGR., PH.D.

THE LABOR MARKET

By DON D. LESCOHIER, PH.D.



Roger Noble Burnham, Sculptor.

**BRONZE DOORS, MAIN ENTRANCE, THE FORSYTH DENTAL
INFIRMARY, BOSTON.**

The Mother and the Commonwealth.

AMERICAN MUNICIPAL PROGRESS

BY

CHARLES ZUEBLIN

NEW AND REVISED EDITION

New York
THE MACMILLAN COMPANY
1920

All rights reserved

~~F61.9988~~

Ednct 729.20.898

July 18. 1922
Harvard University,
Library of the Graduate School
of Education

TRANSFERRED TO
HARVARD COLLEGE LIBRARY
1932

COPYRIGHT, 1908 AND 1916,
BY THE MACMILLAN COMPANY.

Set up and electrotyped. Published September, 1908.

Norwood Press
J. S. Cushing Co. — Berwick & Smith Co.
Norwood, Mass., U.S.A.

To

CLINTON ROGERS WOODRUFF

LONG-TIME FRIEND

INCIDENTALLY FOR TWENTY-ONE YEARS

SECRETARY OF THE

NATIONAL MUNICIPAL LEAGUE



TABLE OF CONTENTS

	PAGE
CHAPTER I. THE CONSERVATION OF THE CITY	1
The Dynamic of the City. The City's Immaturity. The City's Adolescence. Do you Know your City? The Composite City. City Cleanliness and Godliness. The Soul of the City.	
CHAPTER II. THE CITY PORTAL	13
The Best Railway Entrance in the World. New York's Titanic Terminals. Chicago Track Elevation. Philadelphia Track Elevation. Harbor Improvements. San Francisco's and New Orleans' Water Fronts. New York's Bridges. Concrete Viaducts	
CHAPTER III. MUNICIPAL RAILWAY REGULATION	30
The Gigantic Volume of Urban Transportation. Boston's Subway System. Boston's Subway Extensions. New York's First Subway. Rapid Transit in New York. Subterranean Chicago. Chicago's China Nest Egg. Philadelphia, Too! Detroit's Struggle for Municipal Ownership. The Golden Rule and Home Rule in Toledo. Cleveland's Three-cent Fare. San Francisco's Municipal Railway.	
CHAPTER IV. THE CITY STREET	55
The Transmigration of Paving. Granite and Asphalt. Other Substantial Pavements. Wood and Macadam. Tearing Up and Down the Street. Overhead Wires. New York's Buried Wires and Hopes. Baltimore and Washington Conduits. Competition in Municipal Lighting. Municipal Electricity. Seattle Lighting. Ornamental Lighting.	
CHAPTER V. THE CITY'S WASTES	73
Street Cleaning. New York Before Scrubbing. New York After Scrubbing. Waste Collection. Waste Disposal. Baltimore to Seattle. New York's Waste Disposal. Snow Removal. Smoke Abatement.	

TABLE OF CONTENTS

	PAGE
CHAPTER VI. WATER AND SEWERAGE	87
The Conservation of Water. Los Angeles Water Supply. New York City Water Supply. Boston Water Supply. Filtra- tion. Chicago Water Supply. Chicago Sewerage. Sewerage. New York Sewerage. Boston Sewerage. Baltimore and New Orleans Sewerage. Pasadena's Sewer Farm. Public Comfort Stations. Public Drinking Fountains. Public Laundries.	
CHAPTER VII. PUBLIC HEALTH	107
Vital Statistics. Housing. Municipal Markets. Rochester Milk Supply. Infant Welfare. School Medical Inspection. School Nurses. Dental Clinics. Municipal Hospitals. Tuber- culosis Hospitals. Hospitals for Infectious Diseases. Swat the Fly! Mosquitoes. Starve the Rat!	
CHAPTER VIII. PROTECTION	130
Protection. Fire Departments. High Pressure Systems. Fire Losses. Fire Prevention. Police. Two-, Three-, and Five-platoon Systems. Humanizing the Police System. Police Matrons and Policewomen. Traffic Police. Safety Commission. Police and Fire Schools. The Regulation of Alcohol. "The Social Evil."	
CHAPTER IX. JUSTICE AND CHARITY	149
Municipal Courts. Juvenile Courts. The Juvenile Court of Chicago. Court of Domestic Relations. The New York Night Court. Psychopathic Institutes. Los Angeles Public Defender. Court Fines by Installments. Correctional Institutions. The Cooley Farms. Socializing Charity. Dayton Department of Public Welfare. Kansas City Board of Public Welfare. The Widows' Pension Bureau of San Francisco. New York Mu- nicipal Lodging House. Municipal Employment Bureaus.	
CHAPTER X. INDOOR EDUCATION	177
Kindergartens. The Elementary Grades. Manual Training. Domestic Science. Art. Music. Civics. Moral Training. Hygienic Teaching. Exceptional Children. School Lunches. The Home School.	
CHAPTER XI. OUTDOOR EDUCATION	195
Nature Study. School Gardens. Agricultural Education. Home Credits. Vacation Schools. Open Air Schools. Wel- fare Work. Truancy. Evening Schools. School Savings Banks. Museum Coöperation. All-year School. Gary. A Complete School in Brooklyn.	

TABLE OF CONTENTS

ix

	PAGE
CHAPTER XII. HIGHER EDUCATION	211
Junior High Schools. Self-government. Vocational Education. Prevocational Schools. Industrial Schools. Vocational High Schools. Coöperative Schools. Continuation Schools. Vocational Guidance. Junior Colleges. Municipal Universities.	
CHAPTER XIII. PUBLIC LIBRARIES AND MUSEUMS	228
State Aid to Libraries. The Open Book. Departments. Children's Rooms. Circulation. Branch Libraries. Traveling Libraries. Municipal Reference Libraries. Library and School Coöperation. Publicity and Propaganda. The Librarian. Museums. Children's Museums.	
CHAPTER XIV. SOCIAL CENTERS	252
Free Lectures. Chicago School Extension. Rochester Social Centers. A Nation-wide Movement. Recreation Centers. Parents' Centers. Art Centers. Motion-picture Theaters. Citizenship Centers. Civic Secretaries. New York's Recreation Centers. Other Social Centers.	
CHAPTER XV. PARKS AND BOULEVARDS	271
Chicago's Pioneering. Small Parks and Squares. Parkways and Boulevards. Driveways. Outer Parks. Park Systems. Baltimore. Washington. Boston. Rural Parks. Recreation in the Parks. Municipal Forestry. Newark.	
CHAPTER XVI. PUBLIC RECREATION	296
The Joy of the City. Boston First in Organized Play. New York Playgrounds. Chicago Playgrounds. Los Angeles Recreation Centers. The Playground Movement. Public Baths. Boston Public Baths. New York Public Baths. Invading the Country. Municipal Dancing. Municipal Music. Municipal Auditoriums. Municipal Theaters. Sunday Recreation. Festivals. Pageants.	
CHAPTER XVII. CITY PLANNING	326
Seaports. River Cities. Hill Cities. Prairie Cities. Business. The City Sky-Line. Communication. Terminals. Civic Architecture. City Halls. Library Buildings. Schoolhouses. Civic Centers. Residential Areas. Billboards. Recreation. Typical City Plans. Municipal Art Commissions. City Surveys. Municipal Plan Commissions. City Plans Paying for Themselves.	

TABLE OF CONTENTS

	PAGE
CHAPTER XVIII. MUNICIPAL OWNERSHIP	359
Communal Wants. The Hypnotized Business Man. Omaha <i>versus</i> Business. Michigan's Effete Constitution. Elasticity. The Sinews of War. Municipal Trading. Private Initiative. Unre- munerative Activities. Municipal Immortality.	
CHAPTER XIX. MUNICIPAL ADMINISTRATION	376
The Federal System. The Crude Bicameral System. The Organic Federal System. The Business System. The Auto- cratic System. The Council System. The Ultra Commission. The Organic Council. Popular Rule. Home Rule. Crude Home Rule in Chicago. Metropolitan Boston. Organic Home Rule in Los Angeles.	
CHAPTER XX. MUNICIPAL EFFICIENCY	395
Social Efficiency. A Municipal Program. A City Plan. The City's Life.	
APPENDICES	403
BIBLIOGRAPHY	429

PREFACE

THIS is a record of typical instances of American municipal progress. It would take an encyclopedia to catalogue all of the recent accomplishments. The reader who notes the entire omission of a subject is urged to communicate with the author, as there is no exhaustive collection of municipal data. But the reader who is disappointed at the mention of one instance in lieu of another is begged to consider that this volume is necessarily full of such omissions. They testify to the vast extent of municipal improvement. American municipal progress is spectacularly evident to any doubting Thomas from achievements of the twentieth century that could not be recorded in the first edition of this book (1902). Any one who gets discouraged by the difficulties encountered in forwarding a given local improvement has only to scan the collective achievements of this young century to gain abundant courage and faith.

Already this century has witnessed the first municipalized street railways and telephone in American cities; a national epidemic of street paving and cleaning; the quadrupling of electric lighting service and the national appropriation of display lighting; a successful crusade against dirt of all kinds—smoke, flies, germs—and the diffusion of constructive provisions for health like baths, laundries, comfort stations, milk stations, school nurses and open air schools; fire prevention; the humanizing of the police and the advent of the policewoman; the transforming of some municipal courts into institutions for the prevention of crime and the cure of offenders; the elaboration of the school curriculum to give every child a complete education from the kindergarten to the vocational course in school or university or shop; municipal reference libraries; the completion of park systems in most large cities and the acceptance of the principle that the smallest city without a park and

playground is not quite civilized ; the modern playground movement giving organized and directed play to young and old ; the social center ; the democratic art museum ; municipal theaters ; the commission form of government ; the city manager ; home rule for cities ; direct legislation — a greater advance than the whole nineteenth century compassed.

The book is designed primarily to indicate to civic and social workers, public officials, and intelligent citizens the vast scope of municipal activity to-day. It can be made useful by comparing local conditions with the typical instances of excellence gathered from all the cities. The book can be used as a text-book by instructors who employ laboratory methods. A comparison of the topics in the text with the conditions in the locality, supported by appropriate references in the Bibliography, ought to make a thorough sociological investigation of the community feasible.

It is possible to express only impersonally the author's obligations to the many friends and public officials whose kindness has made material accessible or who have read parts of the manuscript. It is also possible to pay in this place only inadequately the debt of gratitude due to Professor Richard T. Ely for editorial suggestions and to my indefatigable secretary, Miss Helen Bernice Sweeney, whose skilled services in collecting and selecting raw material enabled me to make this record.

CHARLES ZUEBLIN.

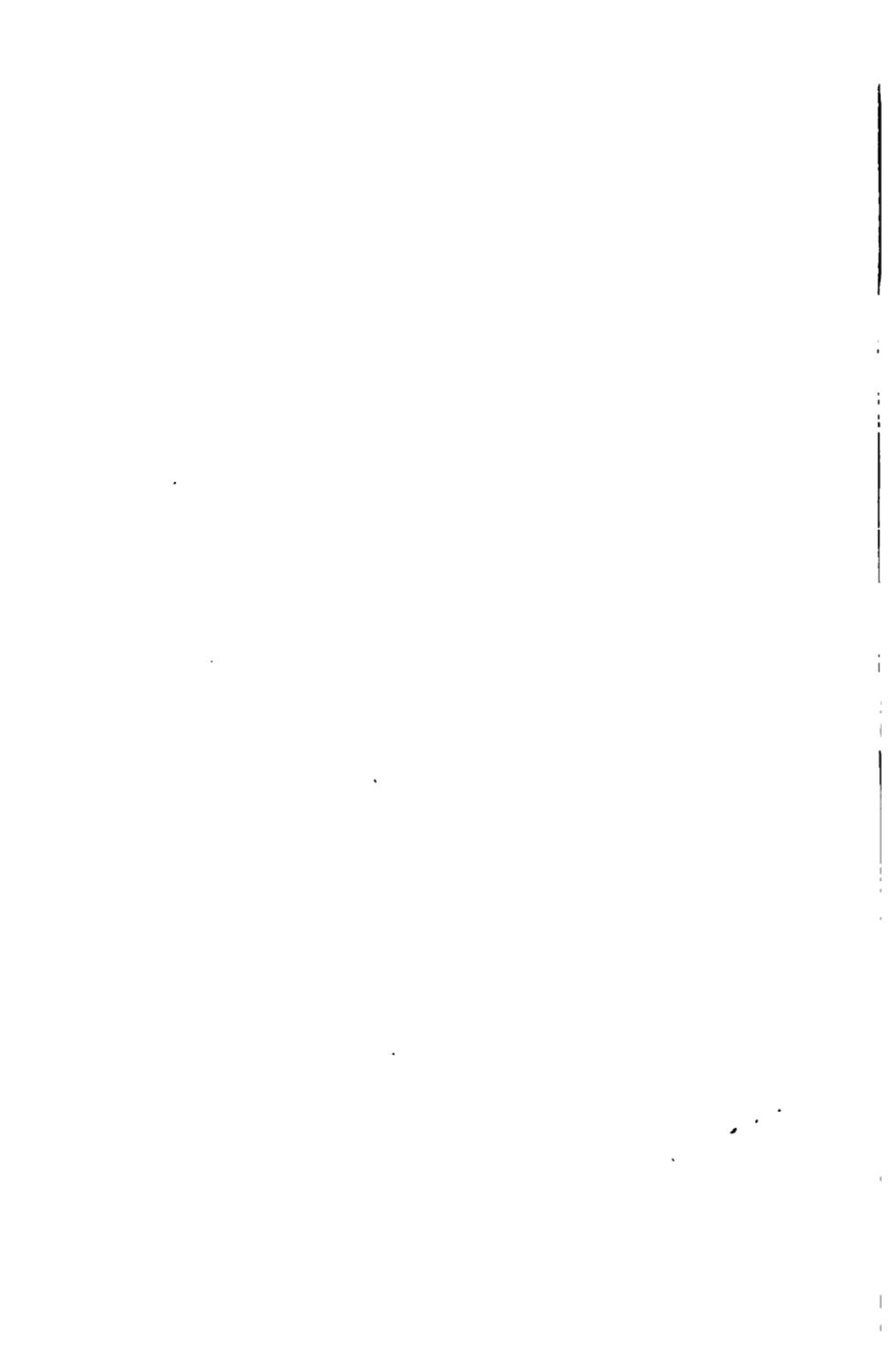
WINCHESTER, MASSACHUSETTS.
Labor Day, 1915.

LIST OF ILLUSTRATIONS

Bronze Doors, Main Entrance, the Forsyth Dental Infirmary, Boston	
	<i>Frontispiece</i>
	FACING PAGE
Union Ferry Building, San Francisco	14
Washington, D.C., Union Railway Station	14
Colorado Street Bridge, Pasadena	28
Boston Library Subway Entrance	34
Boston Subway Station	34
Municipal Trolley Car, San Francisco	52
Cleveland — Three Pennies, or Five Tickets for Fifteen Cents!	52
Cedar Falls, Seattle	72
First Avenue, North from Yesler Way, Seattle	72
A. E. Chapman, Redlands, California, Official Fly Catcher	112
Cleveland Municipal Market and Cold Storage Plant	112
Children Taking the Sun Cure for Tuberculosis, Perrysburg, New York	122
Philadelphia — Mosquito Breeding Pond before Blasting	128
Philadelphia — After Blasting — Water Has Entirely Disappeared	128
Congestion at the Corner of State and Madison Streets, Chicago	142
High Pressure Fire Fighting in New York	142
New York City Municipal Lodging House, Christmas Dinner Applicants	172
Municipal Lodging House Annex, 24th Street Recreation Pier, New York	172
Philadelphia Kindergarten Luncheon	192
The Operating Room, Forsyth Dental Infirmary, Boston	200
Class Visit to Carnegie Institute, Pittsburgh Public Schools	208
Caring for Shrubbery on School Grounds of Froebel School, Gary, Indiana	208
Art Gallery, the Garfield Junior High School, Richmond, Indiana	220
Story Hour on the Roof of a Branch Library, East Houston Street, New York	234
Exterior of Roof Garden, Governor Flower Memorial Library, Watertown, New York	234
Reading Room, Chicago Public Library	248
Voting in a Field House, Los Angeles	260

	FACING PAGE
Pool Room in Forest Home Avenue Social Center, Milwaukee	260
Crown Point, County Driveway, Portland, Oregon	272
Japanese Tea Garden, Golden Gate Park, San Francisco	282
View of the Rockies from Cheesman Memorial, Denver	290
Seward Park, New York's Three Million Dollar Playground	300
The Roman Bathhouse in the Grove, Kansas City, Missouri	300
Charles River Reservation, Boston Metropolitan Park System	310
Revere Beach Reservation, Boston Metropolitan Park System	310
Municipal Organist at the Kotschmar Memorial Organ, Portland, Maine	316
Community Christmas Tree, Madison Square, New York City, 1913	316
10,000 School Children Hold Annual Fête in Central Park, New York, May 11, 1915	323
Sidewalk Encroachments, East 23d Street from Fourth Avenue to Broadway, New York	336
Removal of Sidewalk Encroachments, East 23d Street from Fourth Avenue to Broadway, New York	336
A Chicago Suburban High School Group	344
High School and Stadium, Tacoma	344
Chicago's <i>Boulevard</i> , the Best Lighted Street in America	354
The Toledo Museum of Art	374
Multnomah County Library, Portland, Oregon	386
Springfield, Massachusetts, Municipal Group: City Hall, Auditorium, and Campanile	398

AMERICAN MUNICIPAL PROGRESS



CHAPTER I

THE CONSERVATION OF THE CITY

THE DYNAMIC OF THE CITY

"WHAT is the matter with" the city? paraphrasing William Allen White's famous question about Kansas. The city is alive. That is the trouble with it. It is alive and growing, hard to keep clean, hard to keep straight, hard to regulate after dark and on Sundays — all because it is so much alive. Have you had any experience with growing boys? Then don't call your city "she."

The typical city dweller was said in ancient Rome to be "urbane." He is no more urbane to-day than the inquisitive countryman is "rustic." The rustic has a great white way with him and the city dweller, straphanging or speeding up on the boulevard, has no patience with urbanity. He is too absorbed for courtesy, but he is alert.

Vitality, not urbanity, is the keynote of the city to-day. The twentieth-century city is in a class by itself. History furnishes no prototype. The nameless people crowd in to make a living under an impersonal industrial system.¹ Capital comes from everywhere and the anonymous workers follow. You hear "society" say of the popular resorts: "Nobody who is anybody goes there!" Nearly everybody is lost in the shuffle, and even the social kings, queens and knaves look rather faded. There is no independence any longer. Out in the country the farmer bosses his wife and his help and puts up a bluff of independence. Even the banker cannot do that in the city. The urban families are necessarily interdependent. They do not know each other but they cannot live without each other.

The modern city is the offspring of the industrial revolution. It is also the parent, or at least the foster-parent, of democracy.

¹ Appendix I.

If the people have to live together they have to work together. The meditative rustics at the general store chew their cud and discuss abstract democracy. The city dwellers collectively put water and sewerage systems under the streets that they are going to pave and they learn concrete democracy. The people in the walled city of old huddled together for protection. It was hard to get into the city. The people in the modern city thrive because it is easy to get into the city. The city is a magnet and every added citizen becomes magnetized and tends to draw another.

The compulsion of coöperation makes the city the laboratory of applied democracy.

It is easy to get into the city but it is hard to get out. Why is it hard to get out? The transportation company is willing but the countryman's flesh is weak. Many come to scoff and remain to prey. But the forces of evil triumph only because the possibilities of city life are so bewildering. That is why rapid urban growth does not immediately guarantee a richer life. The muckraker has found the city easy raking not because it is poor and bad, but because it is rich and raw. There are negative forces at work in the city, there are destructive agencies, because much of life is still competitive and unorganized. But the vitality of the city springs from coöperation.

The expansion of the modern urban community makes possible an unbounded enrichment of the common life.

Everybody knows the destructive agencies at work in the city. Not everybody sees that they are good conditions gone wrong. People live too close together because they have not learned to build cities scientifically. People are economically dependent because they have not learned their power. People are envious and irritated by the display of vulgar wealth because they do not see how it curses the irresponsible owners. People patronize institutions of immorality because they do not know how to value human fellowship. People are intemperate because they overwork some of the city's opportunities and don't see the others.

Adults are like children, destructive until their imaginations are set to work at creation.

These disintegrating agencies, and still others, are dissipated energy, human capacity gone to waste. It is our first business

as citizens to conserve this tremendous energy of the city. Europe's great negation makes this our golden time for conservation. If fifty millions a day can be spent digging graves what ought we to spend conserving life? What is more popular than the conservation of our natural resources? Political parties now ask our support for the conservation of our human resources.

When we understand the dynamic of the city — collective life, energy, vitality — we shall engage in the conservation of the city.

THE CITY'S IMMATURITY

The first flaw in city life is congestion. People live too close for health, comfort or privacy. A frontiersman who had had no neighbor within fourteen miles moved on when a family settled within seven miles of him. He wanted elbow room! The city tenement where people have to go out in the hall to change their minds cannot give full human values. Congestion may consist in too many people living in a square mile or too many in a city block or too many in a house or a room. Municipal statistics regard an average of two people to a room in a home as overcrowding. Chicago with no dumb-bell tenements has frightfully congested cottages. New York has the worst congestion in the world in some of its solid blocks.

Free America should contain no city home that lacks a draught through each bedroom, or a sleeping porch.

Industrial dependence is felt in the country as well as in the city, but it is not so obvious. An industrial city generally contains enough surplus labor to beat down the standard of living of the employed and to provide a dangerous fringe of irresponsibility about its industries.

The employed workers usually have very little voice in the management of their daily affairs and hence get no discipline to make them self-governing in public life. Women employed in industry are even less independent than men, and the house-keepers are very generally economic dependents. Even the men of affairs bow before the banks and the newspapers.

Three-hundred-and-sixty-four days of dependence hardly make a free voter on election day.

There is poverty in the country, sordid and ugly. But city

poverty is under the shadow of wealth. Luxury flaunts itself in the city. Mansions, hotels, restaurants, churches, theaters, "social functions" display to the poor the unattainable. Irresponsible riches of lucky speculators or unfortunate and unbridled heirs invite envy and hatred. The classes live apart but they meet on the public street. Menials multiply and sycophants poison society with enervating ideas. Degeneracy follows luxury and the very life of the city is threatened by its prosperity.

Class consciousness saps the common life.

The city is not less moral than the country, but immorality is easier. There are more anonymous people, and there are more accessible vices. Youth early learns the way.

The city's life is tense, eager, exhausting. The day's toil needs some compensation. Women are less domestic than in the country and the habits of men are less regular. Life is impersonal. There are more opportunities for illicit gain. The moral standards become confused. The apprehension of the offender is more difficult. Laws are numerous but their enforcement is lax and tedious.

Custom and law have not been accommodated to the larger life of the city.

Intemperance thrives as well as immorality. The city man has more legitimate thirst than the country man, for his trades are dusty and debilitating, his housing dirty and repellent. The consumption of alcoholic drinks, however, is not determined by thirst but by habit. Good fellowship, facilitated by methods unrelated to normal appetite, invites consumption far beyond bodily needs. The American bar, where the very posture invites indulgence, coupled with the spurious hospitality of treating, induces excess.

Drinking is not the only form of intemperance in the city. The life is essentially one of extremes. Business, society, even culture and religion, are pursued so indefatigably that over-indulgence is general and normality is not yet defined. There are extremes of overwork and idleness in place of sane industry and leisure.

The evils of the city are not inherent and inevitable. They are the momentary failure to use to the best advantage the city's inexhaustible latent life.

THE CITY'S ADOLESCENCE

The growing city is marked by increasing industrial efficiency. There is still frightful waste of economic competition, unemployed science, misemployed men and women and stunted children. But the restricted life of the remote rural districts yields steadily to the coöperative successes of the city. The division of labor expedites and cheapens production; the integration of industry saves time and space; the cohesiveness of the factory and store inspires the coöperative instinct of the worker. Processes are improved; life is prolonged; goods are more abundant. The isolation of the old hand worker is succeeded by the companionship and coöperation of the modern industrialist.

Efficiency is coming to be stated not only in terms of profit and of product, but of human welfare.

Material wealth increases until it is a veritable fortune of King Midas. The mere presence of the people in the city enriches many. Material goods multiply so rapidly under the more or less sporadic economies of to-day that the city dweller is driven to dream of the possibilities of thoroughly organized industry. Riches increase faster than the taste and intelligence to use them. Their misuse suggests the need of better distribution in justice to both the possessor and the dispossessed. The limitations of appetite are manifest. The evasion of the limits of human capacity by keeping up a variety of scattered establishments defeats itself. The geographical diffusion of life is no substitute for spiritual growth. The niggardly treatment of public activities has already served as a reproach to private extravagance.

Private wealth is trying to square itself for impoverishing public life. It is giving its philanthropies. It occasionally gives itself.

Public education draws a growing multitude to the city. The schoolhouses begin to be palaces of learning miraculous as any "castles in Spain." The range of education in the city school is far beyond that of the country school. It even promises to provide a substitute for the education of the field. Art, manual training, vocational training, the extension of compulsory education, the synchronizing of the school age and the factory age leave the country far behind.

The city also boasts of other educational riches — the public library, art gallery and museum; the theater, the press, the church, the street! Best of all, there is the wide diversity of human personality.

Children are beginning to return voluntarily to school after they have been graduated.

In the village street when "a young man's fancy lightly turns to thoughts of love," there are not even potentially visible a dozen mates. In the city he may know no more from whom to choose his life companion, but social selection can make a vastly freer choice possible. The city's multitude provides the answer to the unimaginative farmer whose wife endures to the end or the fickle city youth who experiments freely. Under a reasonable system of social chaperonage the public institutions and grounds of the city may facilitate rational and happy mating. The city schools may supplement maternal instruction and inspiration. The social centers may improve upon the commercial recreation of the community. The unfit may be eliminated by social freedom and publicity. The dread of eugenic teachings may disappear with other superstitions of inexperience and immaturity.

Why leave the fate of the race to accident?

When uniting to provide the fundamental needs of life people forget that they are peculiar and remember that they are human. Eccentricity and pugnacity have a hard time surviving in a city block. The antagonisms that still exist are due largely to the predominance of private life over public life. As public functions multiply and public expenditures increase human pettiness becomes more contemptible. While public life is mean people may be Catholic and Protestant, Jew and Gentile, capitalist and worker before they are citizens. Class consciousness may survive the socializing of our life. But the city by necessity breeds the coöperative spirit and coöperation makes the self-seeking unhappy.

Coöperation is its own reward.

DO YOU KNOW YOUR CITY?

Did you ever ask yourself why you show your visiting friend the bright spots of the city, instead of showing him the whole

city? Do you know what your city can teach other cities and what you ought to learn from other cities? If you were coming in as a stranger would your first view of the city invite you to get off and explore it? Are your railway stations up-to-date? How much unnecessary space is given up to railway yards? Are there deadly grade crossings? Are there interurban trolley systems? Do huge cars thunder down the street and interfere with local traffic, or do they come in over their own right of way to the union station? Can you get easily from the station to any part of the city? Do the street cars go where you want them when you want them? Do you have universal transfers? Can you walk right into the cars or does it feel like climbing an ocean liner from a tug? Does it cost a nickel or less to get a seat, and do you get it? When do the franchises expire and what are you doing about it? Do you know how much it would cost to replace the transportation system?

Do your people deserve any better transportation than they are getting?

How are your streets paved? Are all the public conveniences put in before the paving is laid, or do they forget sometimes? Are the downtown streets cleaned daily and nightly and the uptown streets annually? Do you clean the back streets? What do you do with the refuse? Do you light your streets with it or heat your schoolhouses? Have you taken down all the superfluous poles? Do the business streets in daylight look like boulevards or burnt forests? Does the great white way advertise beer or civic pride? Does the city own the waterworks, gas and electric light, power and heating plants? Are you proud of the water supply? How much do you waste? Do all these departments coöperate and show expenses, profits and depreciation on their books? Are there any franchises expiring so that the city may be more scientifically and economically managed?

Do you know that you read the citizens' character better in the streets than in home or church?

How about your fire department? Is it efficient? Does it have motor apparatus and all the latest improvements? Do you have such bad building laws that you must have the best fire department in the world? Do your police "arrest" people or keep them moving? Do they round up prostitutes and in-

terfere with free speech or do they make your streets safe at night?

Have you ever had any epidemics? Does the board of health keep down the death rate? Has it authority to tear down all hygienic menaces? Does it coöperate with the police, fire and street-cleaning departments to keep the city clean? What do you do with your sewage — fertilize the land or invigorate your neighbors' water supply?

Do these departments handle vigorously and promptly all disease germs, fire bugs and social parasites?

Do your children stay in school as long as they should under present circumstances? Do most of them reach the high school? If not, why not? Do you have manual training, art instruction and vocational training so that they will be prepared to be something besides clerks, lawyers and day laborers? Are the school-houses used every available minute of the year by citizens of both sexes and all ages? If not, who is responsible for the misuse of your investment in school property?

Is your library conducted so that more people use it every month? Does it coöperate with the schools, public buildings, and industrial plants, as well as the homes? Is your art museum popular? Have you a municipal theater or do you not care what your people do with their leisure?

Is education conducted by educators in your city or by tired business men or janitors?

Are your public buildings so dignified that they inspire the citizens and attract tourists? Have you parks and playgrounds wherever needed? Are they managed for the recreation of the people or the amusement of horticulturists? Are all the school-houses surrounded by play spaces? Where do the boys and girls learn to swim? Can the whole population keep clean in winter as well as in summer? Have you annexed as much of the countryside for public recreation as the future of the city warrants? Is your city planned for yesterday or to-morrow?

Do you take as good care of the living as of the dead?

THE COMPOSITE CITY

It has been a common superstition that municipal government is a failure. It is not yet what we could wish. But the external

accomplishments of American cities have been varied and creditable. If we assemble the best examples of their municipal successes, we produce a picture of a composite city inspiring and compelling. Each city is fragmentary and unsatisfactory; the composite city is already realized and provides a practicable vision.

The composite city is not the ultimate city, but it is a convenient working ideal.

The city is not responsible for its topography, but some municipalities have been so richly endowed by nature that they have large obligations. San Francisco, with its bay and Golden Gate and ocean, is the most beautifully situated city in America. New York and Pittsburgh, both located at the confluence of rivers, are favored beyond other cities. Pittsburgh especially, with its hills, has unsuspected opportunities. Seattle, Rome-like on many hills, surpasses Rome in its outlook on the mountains. Even cities of the plain, like Denver and Los Angeles, may have majestic mountain views. It is unpardonable for such cities to be ugly, but it is possible for the most unfavorably situated cities to be beautiful.

The secret of commercial and æsthetic success is respect for topography.

Why should not every city have such a rational city plan as that of Washington? The nation's capital furnishes the standard for all cities at home and abroad, having ease of communication from every part of the city to every other and the best railway entrance in the world. The dignity of the approach to Washington is rivaled only by the Union Ferry Station of San Francisco, where nature's contribution has been respected. Among the minor cities, Providence serves as a model because most of the transportation lines of Rhode Island converge at a union station that faces a spacious plaza and has the beautiful State Capitol building for a background. After the scientific planning of the streets the first consideration for a city is local transportation. Washington shares with Manhattan the unique advantage of being free from overhead trolley wires; Cleveland is proving that three-cent fares pay and San Francisco that municipal ownership is profitable.

If architects are needed to build houses, why not to build cities?

CITY CLEANLINESS AND GODLINESS

A certificate of the city's character is written in the city's streets. The street is a symbol of the city's life. Why should city streets be disfigured when we know that those of New Haven are lined by overarching elm trees? Manhattan and Baltimore have taken down their unsightly poles. Oklahoma City has an elaborate system of street paving. The streets of Denver testify to thorough housecleaning. Compact Philadelphia has abundant lighting in all its streets and alleys, and the great white ways of Los Angeles have been imitated all across the continent. In the larger cities all obstructions are being removed from the streets. Chicago has telephone conduits even in the scattered residence districts and a freight tunnel under every downtown thoroughfare. New York has an express subway running under rivers and skyscrapers, while Boston's little subway system links the vast web of surface cars in the heart of the city. Baltimore and New Orleans, long belated, are completing our most modern sewerage systems under streets that until recently were primitive.

The unobstructed tree-lined vista of the American street is America's chief contribution to city making.

The standards of physical and moral health are bounding upward in American cities. Los Angeles has gone two hundred miles away for an adequate pure water supply. Salt Lake City turns fresh mountain water into its gutters daily. Chicago and Lansing have sanitary drinking fountains at frequent intervals along their thoroughfares. New York City established the first high pressure fire system and is being equipped with comfort stations on the scale of European cities. St. Louis and other communities are learning the virtue of extensive street flushing. Milwaukee leads in free natatoriums for use all the year, Baltimore in public laundries, Chicago and Boston in summer swimming pools. The health departments of all cities are being stiffened, especially by the example of Rochester. Public markets are multiplying, spurred on by the extensive system of New Orleans. The Tenement House Commission of New York rebukes those cities that are still indifferent to housing conditions.

Civic health is attaining spiritual proportions.

Chicago has an elaborate classification of municipal courts designed to treat each offender as a separate personality. One by one there have developed a juvenile court, a boys' court, and morals and domestic relations courts to distinguish offenders from criminals. As Chicago differentiates, Kansas City correlates in the Board of Public Welfare, bringing together scattered institutions with a new moral and social vision.

The dogma of original sin has been scotched in progressive cities.

THE SOUL OF THE CITY

The public schoolhouse has become a center of beauty and life, as well as of light in American municipalities. St. Louis sets the pace for the country in beautiful schoolhouses, Chicago in scientific school buildings. Yet individual instances of distinction are scattered over the country. The most notable high school building of the country overlooks Puget Sound in Tacoma. Menomonie, Wisconsin, was a pioneer with its school swimming tank and Andover with its school campus, although imitators are legion. The uses of the school structures range from the specialized functions of the quadrangle of buildings at Kenilworth, Illinois, to the concentrated activities of the Washington Irving High School in New York. The former represents a modern departure in having an auditorium opening upon the street, as has the high school at Richmond, Indiana, that includes also the unique public art gallery occupying the whole of its upper floor.

The truant officer will soon go out into the byways and hedges and compel the public to come in.

Few public libraries compare with Boston's in beauty, but most of them excel it in democratic service. The branch libraries of Pittsburgh, St. Louis and Detroit are only better endowed than many others. Chicago and Toledo lead in the daily patronage of their art galleries, but Richmond secures an attendance of half the population at its annual exhibit. Groups of municipal buildings are multiplying, like those at Springfield, Massachusetts, and Cleveland, establishing standards of distinction like the cities of history. Washington is alone in the wide distribution of its monuments, but Monument Square in Baltimore and the Capitol grounds of Richmond are embellished by a now accepted American standard.

Civic art no longer languishes in the United States.

Boston has developed in twenty years the most comprehensive and well-distributed park system in the nation. Its nearest rival is Kansas City, Missouri. In ten years Chicago redeemed its defective park system by the addition of the greatest system of recreation grounds in the world. The drives of Madison, Wisconsin, Portland, Oregon, and Colorado Springs annex the countryside as their rivals are doing annually. Even Boston's endowed Common — fifty acres of beautiful open space in the heart of the city — is no longer unique. The redemption of the Mall in Washington and the creation of Grant Park in Chicago testify to a growing respect for life in the midst of the means of livelihood in busy American cities.

Why should any city lack what man has worthily made in any other city?

CHAPTER II

THE CITY PORTAL

THE gateway of the walled city has its modern counterpart in the railway station. The dignity of the city entrance can be maintained as easily in these huge twentieth-century agglomerations of people as in the congested ancient cities within their protective walls. The crux of interurban transportation is the terminal. Well-ordered terminal facilities will of necessity be imposing; they can easily be made dignified or in the case of the largest cities majestic.

The city approach is not limited to the railway station. It may be by water or over water or land. The ferry stations, bridges, and viaducts when most serviceable are most beautiful. If all of these city entrances are correlated with each other and with the local transportation system, the maximum of service is secured with the maximum of dignity. The magnitude of terminal improvements in American cities is colossal and inspiring, but their service is still inadequate. Washington has undoubtedly the most beautiful railway station, San Francisco the most imposing water entrance, Galveston the most satisfactory viaduct, Providence the best correlation of facilities.

First impressions are enduring with cities as with men.

THE BEST RAILWAY ENTRANCE IN THE WORLD

The best planned city in the world was laid out so prematurely that it took a century to grasp its possibilities. When L'Enfant made the plan for the capital of this country in the eighteenth century, with the aid of suggestions from Washington and Jefferson, he supposed that the capital would be approached by water and designed a canal to run from the Potomac to the heart of the city. With the advent of railway transportation the enthusiasm for this new form of rapid transit ran so high that ar-

tistic considerations were ignored. Perhaps the greatest civic blot in any American community was the railway station constructed on Washington Mall. When one remembers that L'Enfant's plan was to have a great formal park stretching from the Capitol to the Potomac, with vistas through stately trees like the Long Walk at Windsor or the avenues of Versailles, the planting of a railway station in the midst of that park seems a crime. This capital offense was not mitigated by the character of the architecture, for human ingenuity could hardly have devised anything uglier.

Nineteenth-century city builders were so immature they were as oblivious to beauty as a small boy is to Titian hair.

When the American Institute of Architects inaugurated the redemption of Washington at the beginning of the twentieth century their magnificent vision did not prevent their temporizing with the problem of railway terminals. It seemed possible to tear down or erect public buildings at will, but the incubus of the railway stations they thought insuperable. The courage and audacity of D. H. Burnham, Chairman of the Washington Commission and fortunately architect of the Pennsylvania Railway, achieved the miracle of surrendering the site on the Mall, uniting all the railways terminating in Washington, abandoning every other station, and concentrating on a union station at the logical location. The radiating streets of Washington produce numerous focal points about the city, making convenient transportation centers. At the most appropriate of these was built the new station facing a plaza and providing the visitor as his first glimpse of Washington with a vista of the majestic dome of the Capitol.

Faith of old was said to be able to remove mountains but faith to-day actually removes railway stations.

The city has not only been relieved of hideous railway stations and unrelated transportation services but grade crossings have been eliminated with consequent economy, convenience and the saving of life and limb. Not less than \$25,000,000 is reported to have been spent in making these improvements, involving an expenditure of five and a half millions by the United States Government and the District of Columbia. The tracks are depressed throughout most of the city, those coming from the South and passing through the heart of Washington being



Courtesy of the San Francisco Chamber of Commerce.

UNION FERRY BUILDING, SAN FRANCISCO.



Courtesy of the Pennsylvania Railway Company.

WASHINGTON, D.C., UNION RAILWAY STATION.



carried in a tunnel. As they reach the station they not only spread into a space ample for the capital city's occasional enormous traffic, but they facilitate the handling of the passengers by coming in on two levels. The only stations exceeding Washington's in area are the two great terminals in New York.

A stub-end station is never a good station. The switching tracks must be outside of the station.

The façade of this great building is of white granite, as wide as that of the Capitol itself. Three huge arches give a majesty that could not be equaled by colonnades such as dominate the architecture of the adjoining post-office building. The concourse, with an area of 97,500 square feet, is said to be the largest room in the world, its dimensions being planned for the exceptional patronage of inauguration time. For this purpose there are also a special entrance and a suite for the use of the President, foreign diplomats and other officials. The station looks out upon a plaza 1000 feet in length and 500 feet in width, formally treated with an impressive fountain representing the globe, in the midst of skillful landscape architecture. A large number of local transportation lines converge on this plaza, giving access to all parts of Washington. This entire section of the city is being reconstructed and the new office buildings about the Capitol will so affect property values that the surroundings promise to harmonize with the station and the public buildings. This is not only America's best railway terminal, but doubtless the most important portal to any city in the world. It must be a civic inspiration to all other communities, for it reveals the fact that a railway terminal need not be forbidding but should herald the claims of the city. It is as though the city stood with open arms awaiting visitors.

All the citizens of the United States say to each citizen: "Welcome to our city!"

NEW YORK'S TITANIC TERMINALS

The greatest city in the Western World was until recently so ill-equipped with terminal facilities that one of a dozen trunk line railways could advertise its possession of the only railway station on Manhattan Island. At the same time its

uniqueness was the only claim this station had to distinction. On the railway side it was reached by a tunnel that was a constant menace to human life, and on the city side it faced a tunnel that prevented any possibility of adequate distribution of the passengers from the station to the city. Most of the travelers to the American metropolis reached it by ferryboats, the very latest of which would not bear comparison with San Francisco's ferry system.

The political annexation of Alaska, Porto Rico and the Philippines has at last been followed by the physical annexation of New York City to the United States.

The improvement of New York's transportation has been so great that it can boast of two titanic terminals unrivaled in capacity and appointments in the world. The cost of these two railway entrances may best express their size to American enthusiasts. The stations and their approaches cost over \$250,000,000, about the amount needed to put two transcontinental railways across Canada. The Pennsylvania Railway not only was obliged to clear an immense area for a perfectly new approach to the city, but was compelled to put tunnels under the Hudson and East rivers and parts of Manhattan, Hoboken and Long Island City. The Pennsylvania Station is therefore more of a revolutionary enterprise than the Grand Central Station. It supplants the old ferry systems, giving greater expedition and convenience, especially in winter. The station also accommodates the Long Island Railway with four tracks under the East River. The total length of the twin tunnels from New Jersey to Long Island is over five miles. The amount of trackage for which provision had to be made by the destruction of buildings, cutting and tunneling in the city is sixteen miles. Nearly a mile of city streets and avenues had to be carried on bridges over these depressed tracks. The Pennsylvania Station is superior to the Grand Central in the dignity of its architecture and in the fact that not all of its tracks are stub, thus giving an easier disposition of the dead cars.

The Pennsylvania passengers are now landed within sight of Broadway instead of in a neighboring commonwealth.

The Grand Central Station involved quite as much excavation as the Pennsylvania Station, although the old tunnel

approach already existed. In eight years' time there were blasted and quarried over 3,000,000 cubic yards of stone. This enormous enterprise was carried on without suspending the 800 daily trains of the New York Central and New Haven Railways. The station has four times the capacity of the Pennsylvania Station. The area covered by the Grand Central Station and yard is nearly three times as great as that of the Pennsylvania and much larger than any other station in the world. In spite of occupying this immense area, the depression of the tracks set free twenty city blocks for buildings. There are five separate levels: the gallery entered from Vanderbilt Avenue, the main concourse on the level of 42d Street, the upper level of forty-two tracks for the through express trains, the lower level of twenty-five suburban tracks, and below all of these the subways for handling baggage. When the local transportation approaches are completed there will be three subway systems at different levels adjoining the strata of the station. One of the significant features of this great terminal is the inclined plane system by which the different levels are reached, thus not only removing the danger of stairways, but keeping separate the incoming and outgoing passengers.

The Grand Central is a twentieth-century station, but its patrons walk out of this modern miracle into the nineteenth-century streets of New York.

These two enormous and expensive improvements, involving the substitution of the railway for the ferry and of electricity for steam, provide for a capacity equal to the expected increase of traffic even in New York. Yet these impressive entrances were completed at a hitherto unheard-of expense, without any provision being made for connecting them. They do not even connect by tunnels, which would enormously cheapen their administration. After excavating millions of cubic yards of material, requiring the bridging and tunneling of streets, no single street alteration has been made to facilitate communication between these two stations. Although the local transportation services included a rapid transit subway from Brooklyn to the Bronx, with its most important station at the Grand Central terminal, and the McAdoo New Jersey tunnels, with one of their terminals a block from the Pennsylvania Station, no underground connection had been begun when these

\$250,000,000 entrances to New York City were put in operation. With such twentieth-century devices as pushing tunnels through the mud of the river, blasting rocks underneath skyscrapers, electric third rail substituted for smoke and cinders, and electric operation of interlocking switches, the correlation of transportation facilities has advanced no step beyond the primitive relations of ferry and horse car. The imperative need of municipal supervision of all railway terminals has never been more eloquently expressed. No engineering or financial ingenuity can conceal the incapacity of the greatest railway men in the country to grasp the social significance of transportation.

What was made possible in Panama by complete Federal control can be achieved in New York by the municipality alone.

CHICAGO TRACK ELEVATION

Chicago is the greatest railway center in the world. One half of the 240,000 miles of railway in the United States centers in Chicago, including no fewer than twenty-seven trunk lines. The incredible incapacity of railway men has brought these roads in from three points of the compass, yet permitted them to cross each other 280 times. The topography of Chicago being perfectly flat and its area enormous, it has had the greatest grade crossing problem in the country. In 1899 the Federal Bureau of Labor reported that Chicago lost more people at grade crossings than the seven cities next in size: 330, as compared with 306 for Philadelphia, St. Louis, Boston, Baltimore, Cleveland, Buffalo, and San Francisco, while New York reported only 124. In the seven years before that time Chicago had elevated between two and three hundred miles of track. Since then it has elevated over seven hundred more, eliminating 780 street grade crossings.

Whether Chicago kills people or saves them, it does it by wholesale. Chicago is not niggardly.

Track elevation in Chicago began in preparation for the World's Fair of 1893 with the elevation of the Illinois Central tracks, which pass for a considerable distance along the shore of Lake Michigan, and then run through populous residential districts. The exceptional advantages possessed by the Illinois

Central Railway as the one company with direct access to the World's Fair grounds made it possible for the city to compel the elevation of its tracks. Twenty-eight miles of all tracks were raised, with the elimination of thirteen grade crossings at a cost of two million dollars. This work was projected in May, 1892, and completed in time for the World's Fair.¹

In 1893 Chicago put its best foot forward. In twenty years its labors have been worthy of a monster centipede.

Some of the subsequent projects required the application of exceptional engineering skill, owing to the planless method of approaching the city. At Sixteenth and Clark streets one of the most dangerous grade crossings was eliminated, with equal gains to the railways and the city. At this point the different lines of railway crossed each other and the street at three different angles. The result of the improvement has been that the railways now cross each other at grade at one crossing, while some of the tracks are depressed under others; the street, paralleling one system of tracks, passes over the second and under the third. This complicated problem, involving the elevation of less than a mile of first main track in any direction, cost the combined companies two million dollars. Another engineering triumph was at Grand Crossing, where four steam railways and one street railway crossed at grade. Both street and grade crossings have been eliminated, and daily six hundred trains now cross at three levels. The Pennsylvania, Illinois Central, and New York Central roads have each been taxed over a million dollars, and the Nickel Plate half a million for this improvement.

"Safety First" might have been the slogan for these magnificent changes, but "service" has proved a close second. The roads have cut their running time to some suburbs in half.

Nowhere has there been a municipal task of greater perplexity and magnitude. The only compensating factors have been the flatness of Chicago and the abundance of sand for filling. Nearly a thousand street, alley and railway subways have been constructed by a great variety of architectural and

¹ The next important piece of track elevation was provided for by ordinance in July, 1894, to raise the tracks of the Lake Shore and Michigan Southern Railway Company, and the Chicago, Rock Island, and Pacific Railway Company. Forty-three grade crossings were eliminated and sixty miles of track were elevated, at a cost of three million dollars. At one point nineteen parallel tracks were raised.

engineering methods. Over a thousand miles of track have been elevated. Over a score of railroads have been active for two decades in achieving this colossal enterprise. The city has borne the expense of damages to abutting property, but the railroads have paid the entire expense of elevating their tracks, — up to December 31, 1913, seventy million dollars! Half of this at least might have been saved had the railways been as scientific as the municipality. In 1912 the railways crossed each other at grade 239 times.

Chicago's effective municipal control has removed the deadly grade crossing at the expense of the railways, giving them incidentally speed and safety.

PHILADELPHIA TRACK ELEVATION

Next to this work in Chicago the most important is doubtless that done in Philadelphia. The first track elevation there was also necessitated by a large exposition, the Centennial, in 1876, when the Pennsylvania Railway undertook to penetrate to the heart of the city from West Philadelphia by a substantial elevated structure. This was followed some years after by the Philadelphia and Reading Railway carrying its lines to an equally central position; also by the Baltimore and Ohio Railway tunneling the city for a considerable distance; later by the subway constructed by the city and the Philadelphia and Reading Railway Company, from the location of the old station at Broad and Callowhill streets west to Fairmount Park; and more recently by the elevating of the tracks of the same road to Wayne Junction, a distance of more than four miles.

The Pennsylvania Avenue route to Fairmount Park testifies to the municipal advantage in depressing rather than elevating railway tracks.

From the beginning of the Pennsylvania Avenue subway the street has been boulevarded, with openings for ventilation at intervals, surrounded by a rustic masonry wall, on which vines have been planted, and around this wall is a grass plat six feet wide, in which appropriate shrubs are planted, making an ornament to the driveway while furnishing a convenience to the tunnel. The avenue is 120 feet in width, with sidewalks

twenty feet wide, having six feet of sod and also planted with selected trees. As the avenue approaches Fairmount Park it widens into a plaza opposite the Green Street entrance, where the Washington Monument is located. To old Philadelphians this is one of the most remarkable improvements of the city, because what was once an unsightly railway yard is now a spacious boulevard. For many years there was intense opposition in Philadelphia to providing an appropriate roadway to Fairmount Park, this earliest of American large parks being without any adequate approach. The feeling that a boulevard was an aristocratic device has weakened in the face of the bicycle and other democratic means of conveyance, and there is no less appreciation shown to-day for the beauty than for the convenience of the new Pennsylvania Avenue.

Broad Street, Philadelphia's Appian Way, has thus been preserved as a great unobstructed artery, the pride of the city.

The heart of Philadelphia is served better than any other metropolitan city. It is now proposed to clear out a great southern area that has been held back by inferior topography and railway obstruction. Where the Schuylkill and Delaware rivers meet, there is a vast area of low-lying, mosquito-infested ground traversed by freight roads, beyond which is the Navy Yard on League Island. Philadelphia is thickly settled two or three times as far to the north of its business area as to the south. By the relocation of freight tracks, the extension of the Belt Line to the periphery, and the elevation of tracks where necessary, several square miles of land will be set free for residence and industrial development. Incidentally, Philadelphia will municipalize two important stretches of waterfront. The opportunity is offered for a better planning of streets than the wasteful gridiron plan of William Penn, that originated in Philadelphia. The area will ultimately be served by Philadelphia's municipal subway. League Island Park, at the foot of Broad Street, the climax of this big transportation scheme, will at last be accessible.

Philadelphia is doing at its southernmost extremity what Chicago has been unable to do immediately south of its business district — clearing out needless railway yards for business and life.

HARBOR IMPROVEMENTS

Australia has no private riparian rights. The states own sixty-six feet back from every waterway. In this country we have been prodigal in giving away the invaluable water fronts of our cities. Nothing indicates better the accidental character of municipal improvement than the ownership of harbors and docks. The contrast between San Francisco and New Orleans, that own virtually all of their water fronts, and the lake cities, that own next to none, is instructive if not inspiring. The dependence of the cities on the Federal Government is second only to their dependence on private capital. Galveston, which holds such a proud record for civic courage, owns only 20 per cent of stock in one of its dock companies, although the government has spent twenty millions improving the harbor and maintaining a thirty-foot channel. Houston is pushing Galveston, sharing with the Federal Government the two and one-half millions' cost of making a twenty-five foot channel fifty miles to the sea. Houston is also building municipal docks. Of Philadelphia's thirty-five miles of water front the city owns 13 per cent of the docks and the Federal Government 12 per cent. The city and the state have spent nine millions in improvement and the National Government eighteen millions, giving Philadelphia a thirty-foot channel. The Harbor Commissioners of Oakland are trying to rival San Francisco, and spent nearly three millions in three years for municipal docks and belt railroad.

The key to transportation is the control of terminal facilities.

There is no geographical monopoly of a progressive harbor policy. San Francisco and New Orleans lead.¹ Baltimore's fire spurred the citizens to many forms of activity. Nine millions have been spent for wharfage improvements, giving the municipality five miles of water frontage and 7500 feet of docks, including a great commerce and recreation pier. New York has 577 miles of water front, not counting the Jersey shore. The city owns 349 miles and the Federal Government ten miles. Of the 805 wharves the city owns 235. The income from rented piers had risen from \$215,524 in 1871 to

¹ Baltimore, New York, Boston, Los Angeles, Oakland, Chicago, and Seattle follow.

\$4,772,885 in 1914. Over a million dollars more comes in from ferry leases. The channel is 40 feet deep. One thousand foot piers are being constructed north of the present transatlantic terminals, condemning land so as not to interfere with the river traffic. In spite of New York's recent improvements, wharfage has increased only 26 per cent while commerce has increased 93 per cent.

New York, haven of exploitation, now owns half of its water frontage.

Boston has just discovered that it has a harbor worthy of competition with New York. The Directors of the Port have been created and empowered to spend \$9,000,000 at once. The largest pier in the world has been constructed — the Commonwealth Pier, 1200 feet long, 400 feet wide — at a cost of \$3,500,000. The water is forty feet deep at low tide. A new pier in East Boston is being built at a cost of \$1,750,000, one at Jeffries Point costing \$3,000,000, and the same amount is being spent for a dry dock 1200 feet long.

It is a long time between tea parties, but Boston has a new brand of hospitality and can accommodate any ship afloat or sighted.¹

Davenport, Iowa, secured a special charter in 1910 creating a levee commission for the redemption of its river front and the construction of freight terminals. The work has been in progress since 1911. More than a mile of sea wall was built in the first three years and twenty acres of land reclaimed. Twice as much sea wall is still to be built, when 141 acres of land will be redeemed at a cost of \$750,000. It is estimated that the land will be worth \$3,000,000. The bonds will be redeemed, it is supposed, within twenty years, and this great contribution to river shipping will be secured for the benefit of Moline and Rock Island, as well as Davenport, without any cost to the taxpayers.

The most spectacular harbor improvements of recent years have been made by Los Angeles and Seattle. The former has acquired a harbor 21 miles away, annexing it by a narrow strip

¹ Savannah is somewhat like Boston. It has a historic harbor and owns a mile and a half of water front, but only 303 feet of wharves. Mobile and Memphis do better with 2000 feet. St. Louis leads the northern river cities. Minneapolis is making itself the head of navigation of the Mississippi, in defiance of St. Paul and Nature.

of land incorporated in the municipality. The latter has connected an inland lake by canal with Puget Sound. Los Angeles has now over 23,000 feet of water front on the harbors of Wilmington and San Pedro, and nearly 44,000 are in litigation. In two years five and a half millions in bonds have been issued. Seattle is adding about the same amount, 23,000 feet, at an expense of \$6,300,000. A five million dollar bond issue is being used to condemn 112 acres for industrial purposes. A federal ship canal of 30-feet depth is being constructed at a cost of four million dollars to connect Lake Washington through Lake Union and the Duwamish River with tidal water. Two fresh water harbors are being added. The water front will be increased from 14 to 150 miles.¹

Cities will buy back their own water fronts as they are recovering their streets.

SAN FRANCISCO'S AND NEW ORLEANS' WATER FRONTS

Festive San Francisco and indolent New Orleans share the honor of having the best dock service in America. San Francisco Bay has a shore line of one hundred miles, of which ten miles (four of which are already used for shipping) are in San Francisco. The latter is owned by the State of California and administered by the State Board of Harbor Commissioners. New Orleans has a water front of forty-one miles, all of which except 14,000 feet is owned by the State of Louisiana and administered by the Board of Commissioners of the Port of New Orleans. These cities are thus in happy contrast with most Atlantic seaports and all the cities on the Great Lakes.

The ports of San Francisco and New Orleans are the most eloquent answers to those who worship the fetish of private ownership.

Since 1863 twenty-three millions have been spent on the harbor of San Francisco, the greater part from the income of the docks. The latest appropriations have been nine millions for harbor improvements and one million for buying tide lands for future extensions. About twenty-five acres have already been redeemed from the sea. Wharves are leased for periods

¹ See Appendix 1 for details of Seattle's municipal harbor expenditures.

not exceeding fifteen years, the lessee paying for the cost of construction in advance. There are now in process of erection eighteen new concrete piers, fireproof and rat proof. San Francisco is not likely to be menaced by the bubonic plague again. The legislature has been asked for another ten millions for future developments.

With a harbor flushed by the tides San Francisco can well afford to spend state money on permanent improvements.

The New Orleans Port Commission took over the public wharf system in 1901. The Federal Government has spent nearly two millions protecting the levee. In recent years the community has issued bonds to the amount of three and a half millions for harbor improvements. Only six wharves are privately owned. The Board controls five miles of wharfage and three and a half miles of steel sheds. In ten years the earnings of the Port have doubled, increasing from \$215,000 in 1902 to \$430,000 in 1912.

The Gateway to Panama is well lubricated.

San Francisco and New Orleans each owns a belt railroad connecting its docks with the railways. That at San Francisco was until recently operated in two sections, but these have been united and connected with the Panama Exposition site. The New Orleans Belt Railroad runs for twelve miles along the water front, joining eight trunk lines of railway. When completed it will circle the business district with twenty-two miles of track. It is already making a satisfactory profit. It not only carries freight but serves the citizens by collecting garbage with seventy-eight garbage cars from five stations along the river. The garbage is carried to swamps that are being prepared for agricultural purposes. The dry refuse of the city is similarly handled for city filling. The garbage investment alone represents half a million dollars.

These cities not only direct their freight traffic, but make a profit in the process.

The Harbor Commission in San Francisco also operates the Union Ferry Station that has the largest patronage of any terminal in America — forty million people annually coming from the various suburbs by the best ferryboats in the United States. For the protection of the water front the Commission also controls a street 150 feet wide, even to putting sewers

under the outer half of it. Private ownership by a terminal company in a supine city like St. Louis stifles millions of dollars' worth of business annually. In San Francisco and New Orleans public ownership of the water fronts and belt railways points the way to the logical solution of business incompetence.

Municipal ownership succeeds in direct proportion to its magnitude.

NEW YORK'S BRIDGES

The bridges across the Harlem River gave the only land approach to Manhattan Island as late as 1882. The original Brooklyn Bridge, begun in 1870, was opened for use in 1883. The congestion of its traffic rapidly increased to unbearable proportions, but for two decades it had no competitor. The evening mob at the New York City Hall became a byword in the transportation world. The old bridge still serves more people daily than any other approach to Manhattan, but its two elevated and two trolley tracks are now supplemented by thirty-four others. In 1903 the Williamsburg Bridge over the East River was opened with its six tracks. There have now been added six tracks on the Queensborough Bridge, eight on the Manhattan Bridge, two in the Brooklyn subway, four in the Long Island Railway tunnels, two in the Belmont tunnels to Brooklyn, and the six tracks under the Hudson River of the McAdoo and Pennsylvania systems.

Local transportation is solidifying Greater New York as transcontinental railways unified America.

The old Brooklyn Bridge, over a mile long, with its 1600-foot river span, 125 feet above the water, supported by its majestic stone piers 270 feet high, hangs over the river like the product of primeval spiders, still the architectural wonder of the world. It lends dignity to the splendid stream that its successors only disfigure. The subsequent bridges represent interesting experiments in engineering and architecture as well as indispensable supplements to a hopelessly overtaxed bridge. But the majesty of the river is marred. The Williamsburg Bridge — first aid to the overburdened — has a river span almost identical in length with that of the Brooklyn Bridge. Its total length is much greater and it is also thirty-three feet wider than its predecessor. Its cost was less, but with the approaches

amounted to twenty-two millions as compared with fifteen millions for the Brooklyn Bridge. The Queensborough Bridge across Blackwell's Island to Long Island City is a gigantic cantilever structure. It is the heaviest and perhaps the clumsiest bridge of its kind ever built. The latest of the East River bridges is the Manhattan near the original Brooklyn Bridge. It is lighter in weight and appearance than the others.

New York has learned a good deal about bridge building after spending ninety or a hundred million dollars.

The last two East River bridges cost fifty millions and yet there was no provision made for street connections or transportation service until they were nearly or quite completed. It might be expected that expenditures of this magnitude, spread over nearly a decade, would include the most scientific planning for the use of the investment. Not only was there no concerted plan made for a comprehensive rapid transit system, but the approaches to the individual bridges were afterthoughts. The Blackwell's Island Bridge also failed to satisfy the requirements of the contract. The bridge as built was able to carry no more than two-thirds of the weight contracted for. It weighed 25 per cent more than was expected and cost a million more than the contract price.

It must be a distinct comfort to New Yorkers that the latest of all these bridges, the Manhattan, represents a partial return to sanity, service and good taste.

The offensive overcrowding of the old Brooklyn Bridge is now a memory. Each year there is a better distribution of the traffic. Each year there is a clearer recognition of the need of new and better forms of rapid transit. The new subways will bring still greater relief to both Manhattan and Brooklyn. A wider distribution will come from the addition to the Pennsylvania Railway's service of the new bridge or viaduct, three miles long, across Hell Gate and the islands of the East River to the Bronx, connecting the Long Island Railway system with the New Haven Railway. Now there is serious discussion of a monster bridge across the Hudson. The convenience and economy of tunnels and their superior rapid transit service do not discourage the building of these expensive bridges that tend to annihilate the physical barriers to the unity of the nation's metropolis. The Henrik Hudson Memorial Bridge

over Spuyten Duyvil Creek must now be added to those beautiful embellishments of the Harlem River — the High Bridge of stone and the Washington Bridge of iron — unrivaled in their respective claims to beauty.

The last word in bridge making in New York is that service and beauty are the guarantees of economy.

CONCRETE VIADUCTS

Nothing has added more to the architectural embellishment of cities in the twentieth century than the substitution of concrete viaducts and bridges for structures of iron and wood. They have all the beauty of plasticity and adaptation to function of plastic architecture, while the dull color has a background to throw it into relief which is not always true of buildings. Highways from one end of the country to the other are dotted with these graceful bridges. American municipalities have entered upon an era of viaduct and bridge construction that has no prototype this side of the Roman Empire.

The American city is at last repeating history by building for posterity.

These structures are found from the Atlantic Coast to the Pacific and from the upper Mississippi to the Gulf of Mexico. The most notable is the Galveston Causeway. When Galveston began its redemption from the tidal wave it had to have the assistance of the Federal Government in building a sea wall. It, however, cemented its relation to state and nation by building a concrete causeway four miles long, at a cost to Galveston County of over two million dollars. Over thirty-five hundred feet of protected roadway projects out from the mainland and over fifty-five hundred feet from the island, connected by a hundred-foot span arch bridge, twenty-five hundred feet long, with a drawbridge. The causeway provides for two steam railway tracks, one trolley track, a driveway and a walk for pedestrians.

America has now a Giant Causeway to rival Ireland's.

Texas also claims the next great viaduct of the country, that at Dallas being over a mile in length. It connects Dallas with a recently incorporated suburb, Oak Cliff. It passes over the Trinity River and serves as part of the boulevard system of



COLORADO STREET BRIDGE, PASADENA.

the metropolis of northern Texas. Six thousand five hundred feet long, with ornamental balustrade, brilliantly lighted at night, this utilitarian viaduct is more conspicuously decorative than any public building in the city.

Kansas follows Texas in pointing the way to the East. Wichita has built a new viaduct more than a third of a mile long to carry a street over the approaches to its new railway station. Greater Kansas City has connected its Missouri and Kansas communities by a beautiful viaduct over the Kaw River valley. It leads to the new Union Station park, making one of the most ambitious city entrances in America.

These cities have burned their old bridges, but they need not, and cannot, burn their new ones.

Milwaukee and St. Louis have built rival viaducts. The Grand Avenue viaduct is a part of the comprehensive boulevard system of Milwaukee, — a two thousand foot link in a hundred mile system. The Kingshighway in St. Louis is carried over a series of railway tracks by a viaduct a third of a mile in length.

Pennsylvania has accepted concrete construction. In addition to the private bridge, nearly half a mile in length, at unprogressive Allentown, Harrisburg has in the Mulberry Street Viaduct a beautiful bridge, 1841 feet long, and Reading's Penn Street Viaduct is 1350 feet in length. Reading has the satisfaction of having borrowed a method of construction, but of using her own talents and materials. The sand came five miles from the city; the reënforced iron from the mills of Reading; and the rails from a town in the county. Everybody employed on the bridge, except the consulting engineer, came from Berks County, and every bondholder is a resident.

Back to the west we must go for the most beautiful of these concrete bridges. Pasadena has built one 1460 feet in length over the Arroyo Seco. This bridge was modeled after the Walnut Lane bridge spanning Wissahickon Creek in Fairmount Park, Philadelphia. Curving across the ravine its graceful arches make a vision of stalactite beauty.

Science and art know no geographical limits and are abolishing physical limitations. Business will learn economy when citizens and public officials have vision.

CHAPTER III

MUNICIPAL RAILWAY REGULATION

THE unregulated competition of earlier days has given way to unified systems of street railways. A satisfactory transportation service cannot be secured by competition. Every section of the city must be connected with every other section and with the suburbs. While no city has correlated all of its transportation units, some have consolidated their street railway lines. A few even have through routes, the only scientific way to serve a city. The inevitable result of monopoly has been municipal regulation. In the case of New York (Brooklyn Bridge railway), San Francisco, Seattle, Tacoma, and St. Louis the competition of municipal lines has been tried.

Competition is antiquated, but has been forced on cities by their constitutional limitations.

The competition of different kinds of services has of course continued. Steam railways and busses, elevated and subway systems, have invaded the preserves of the trolley lines. Detroit runs auto park busses across the bridge and around Belle Isle Park, charging a three-cent fare in summer and five cents in winter.¹ A new competitor of the trolley has appeared in the jitney. Haughty transportation magnates have suddenly become solicitous for the public weal. Unwonted courtesy is shown passengers and zeal is exhibited to make the streets safe. Municipalities have found it difficult to regulate the jitney. Although it has made serious inroads on trolley receipts it has not demonstrated its permanence. Hard times, an abundance of second-hand autos, and the arrogance of street railway magnates have produced epidemics of jitneyitis all over the country.

¹ Over 600,000 passengers in 1913 crossed the bridge and 16,000 rode around the park. Nearly 45,000 park employees paid only one cent. Yet the entire enterprise pays for itself.

A valid objection to the jitney is that it duplicates the trolley and gives no new service. The trackless car ought to be a feeder to the tramway. The jitney originated on the Pacific Coast, but 500 of them are said to have invaded Providence. An unsympathetic public, long scorned by the New Haven Railway (that runs the local trolley system), listens with unconcern to the tale of money invested in a new tunnel and new cars, in addition to a heavy franchise tax. The Exposition cities of the Pacific Coast are reveling in the new form of cheap transportation, but suffering from the inevitable accidents.¹

Even if the advent of the jitney is only a flurry, it is the latest argument for complete municipal control.

THE GIGANTIC VOLUME OF URBAN TRANSPORTATION

The Swat the Fly crusade has been stimulated by the paralyzing statistics of reproduction of the agile, vernal fly. No one pretends to understand what a billion or a trillion is, but it is the patent duty of the good citizen to swat and swat early! The enlightened citizen feels as the transportation magnate must who considers the aggregate volume of passenger travel on urban railways. In 1902 the street railways of the United States carried 5,836,615,296 passengers. By 1907 this number had increased 63 per cent to 9,533,080,766. The street cars in 1907 traveled over a billion and a half of miles. These figures are made slightly intelligible by counting up how many passengers ought to be carried if half of the inhabitants of our cities made two trips a day: namely, about ten thousand million!

Meanwhile it is the privilege of the transportation magnate to swat.

The surface and elevated roads of New York City carry more passengers yearly than travel on all the steam railways of

¹ The jitneys of Nashville pay \$240 to city and state for their annual licenses. Fort Worth imposes liability insurance and a limitation on the number of passengers. Denver requires a franchise from the city with a maximum fine of \$300 for neglect or ninety days imprisonment. Oakland and Ogden demand a bond of \$10,000. Oakland has been a pioneer in accepting as well as regulating the jitney. Routes are specified, but jitneys are allowed to meet exceptional demands beyond their routes, such as taking children to and from school, meeting trains, or serving special gatherings of people. Oklahoma City prohibits the jitneys from operating their cars "longitudinally" on any street occupied by a street railway, thus putting the busses out of business.

North and South America, including suburban, long distance and transcontinental travel from the Grand Central Station of New York to the Union Ferry Station of San Francisco, and from the Grand Trunk Pacific of Canada to the Chilean-Argentine system. In 1913 the New York City surface, subway and elevated systems carried 1,769,889,284 passengers who paid their nickels. Chicago carried over three-quarters of a billion people on its surface and elevated railways, Philadelphia over five hundred million and Boston nearly four hundred million. Cleveland's three-cent fare induced over two hundred million passengers to use the cars in 1912.

While the citizen is grateful for these huge enterprises the magnates, in the absence of municipal ownership, continue to swat.

What may puzzle the careless citizen is that the great railway stations of New York do not send out and receive so many trains or passengers as other terminals. The North and South Stations of Boston are each ahead of the Grand Central Station in New York. The Union Ferry Station in San Francisco handles forty million people a year. That is a million and a half more than Boston's busy South Station, with all its summer traffic. These figures, however, are chiefly due to the enormous suburban travel. Boston and San Francisco are the only cities in the country that have more people living in the suburbs than in the city.

Chicago's steam railways are $2\frac{1}{2}$ times as extensive in the city limits as the elevated railways, but carry only one-fourth as many passengers.

People and goods travel where they must. Sometimes a far-sighted railway promoter like Collis P. Huntington or James B. Hill may anticipate the development of an unsettled region. People must be grateful to them even though their rewards are excessive. Generally, however, transportation follows population. There is no such secure investment as transportation in a growing city. Why should these assured revenues be guaranteed to the lucky investors while the people who create these values must still support all the unremunerative enterprises? In 1912 the elementary schools of American cities cost the citizens \$110,000,000. Five years earlier the street railways of those same cities earned a net profit of \$138,000,000.

Urban transportation is our safest investment. Cities own the unprofitable activities. What is the answer? The fly will turn.

BOSTON'S SUBWAY SYSTEM

Boston is a city of three-quarters of a million people, surrounded by suburbs containing a still larger population. In every direction in and out of Boston stretch populous areas along irregular lines of travel initiated years, even centuries, ago. Nearly forty municipalities independent in government, if not in interests, are bound together primarily by a transportation system. Boston was the first metropolitan city to investigate its transportation needs and apply a comprehensive remedy. A Rapid Transit Commission, authorized by the Massachusetts Legislature in 1891, issued its report in 1892. The report set out where the people lived, how they traveled, how their goods were carried, what they paid and what had to be done to utilize to best advantage street railway, steam railway and harbor facilities by correlating surface, underground and overhead systems.¹

It used to be said that in spite of crooked streets it was no trouble for a stranger to get around Boston; his difficulty was to get across.

The Rapid Transit report showed that while Boston's traffic was doubling every decade, the street cars at the rush hours moved in unbroken procession down its main street. It was a spectacular act to take the cars entirely off of that street and put them in a subway, although the railway company held

¹ According to the report, "One hundred years ago Boston contained eighteen hundred people, and its narrow lanes wound in and out among its hills as individual fancy or the configuration of the ground dictated. The ten-mile circle around it may have held half as many more who carried on what little traffic existed with the town over a single highway along the Neck or across the water in boats. Fifty years later the same territory which originally constituted old Boston, boasted a population of nearly one hundred thousand, and within a radius of ten miles from the Old State House clustered one hundred and seventy thousand inhabitants. . . . In the year ending September 30, 1871, the steam railroads brought into and carried out of Boston seventeen million passengers. In the year which closed June 30, 1891, the volume had swollen to fifty-one millions. The travel had doubled in ten years. Similar extracts from the street railway statistics show that in the year 1881 the street railways within the ten-mile limit carried sixty-eight millions, and in 1891 they reached the grand total of one hundred and thirty-six millions. In other words, the traffic doubles in each decade."

the belated idea that an elevated structure might be erected in Tremont Street. Yet the service of the subway in focusing the traffic of the city was infinitely more important than the dramatic clearing of Tremont Street. A new device in rapid transit was introduced when surface cars and elevated trains from the four points of the compass tunneled their way under the shopping district of Boston. An inestimable social service was performed when the building of the subway by the city signalized the control of all transportation services by the public ownership of the strategic link.

The municipal ownership of Boston's subway system is a contribution to the art of public control as important as the subway is to the science of transportation.

The Rapid Transit Commission brought the steam railways of Boston together in two union stations, connected by an elevated railway running along the chief water frontage of the city. It revised the routes of the street railway lines to give a universal transfer system throughout Boston for a five-cent fare. It built the subway under the Common, the Public Gardens and the busiest part of Boston. It provided for elevated railways and a tunnel to connect Boston's most congested areas. The connecting link in this system was the Tremont Street subway a mile and a half long. One year after it was opened one out of four of the two hundred million passengers used this little link that constituted only one-eightieth of Boston's trackage. The speed of the Tremont Street cars was increased from two miles an hour to seven or eight. The chief limitation to rapid transit — congestion in the heart of the city — had been most successfully attacked in Boston. The subsequent congestion of the subway was due to growth of population and the undue influence of Tremont and Washington street merchants.

Municipal ownership scored another triumph when the subway cost nearly a million dollars less than the appropriation!

BOSTON'S SUBWAY EXTENSIONS

Boston not only has been growing as rapidly as other cities; its suburbs have been growing more rapidly than those of any city except San Francisco. Since the opening of the first



Courtesy of the Hecla-Winslow Co.

BOSTON LIBRARY SUBWAY ENTRANCE.



Courtesy of Boston Transit Commission.

BOSTON SUBWAY STATION.

Boston subway in 1897 the system has been developed with arms ramifying in all directions. Each addition to the transportation system has provided momentary relief, which has encouraged travel so that congestion soon demanded still other extensions. The one hundred and thirty-six million passengers of 1891 grew to two hundred and twenty-two million in 1902 and two hundred and seventy-one million in 1907. The Tremont Street subway was soon overtaxed, while the parallel business thoroughfare, Washington Street, became intolerably congested. The first subway was supplemented in turn by the Washington Street tunnel (relieving the Tremont Street subway of the elevated trains) and the Cambridge subway with its own trains to the adjoining city on the north. East Boston had been connected by a tunnel supplementing the municipal ferries, so Dorchester, to the south, clamored for equal provision. Each set of Rapid Transit Commissioners has seriously endeavored to add a link to a comprehensive solution of the rapid transit problem in Boston.

A modern transportation system is one that connects every part of the urban district with every other part by rapid transit.

Municipal ownership was not secured without vigorous agitation and has not been continued without vigilance. In 1902 the Elevated Railway Company, the lessee of the subway, endeavored to substitute private for public ownership of the next extension. The methods of influencing the legislature and public opinion were not such as to commend the company to the public. When the latest extensions were proposed in 1911 the company again wanted to lessen municipal authority, but by a compromise all leases of old and new subways were made to terminate in 1936; the public is to receive 4½ per cent rental while the leases last; and municipal operation is made ultimately feasible.

The municipal ownership of the Boston subway has been profitable to the city, not burdensome to the operating company, and represents the least a city can do that protects its streets for the people.

The total investment to June 30, 1913, in publicly constructed and owned subways in Boston, is twenty-two million dollars. The subways (with the exception of the Cambridge tunnel) are all in an area not over two miles square. They focus trans-

portation coming from all directions and reaching the subways by a dozen entrances. Transfer for a single fare from every part of the city to every other part under shelter is thus made possible.

Boston now owns a twenty-six million dollar subway system by which it controls an eighty-two million dollar transportation system; New York fifty years hence may own a two hundred million dollar subway by which it promises to control nothing.

New York's enormous investment in subways represents some genuine and invaluable rapid transit service and ultimate municipal ownership. But it is unrelated to the other transportation systems of the city and does not even connect the railway stations. Chicago receives 55 per cent of the net revenue of the street railway company to be set aside for the construction of a municipal subway system, like that of Boston. Philadelphia, the ingénue of cities, has a privately owned subway under one of its streets, having no connection with a comprehensive transportation system. Philadelphia is invited now to finance for lease to a private company a subway system which will return to the city any revenues over 6 per cent on the company's investment after the company has been reimbursed for present and potential losses due to public competition. Pittsburgh, also in Pennsylvania, with the worst transportation service in the country, can gain control of the system only by building a municipal subway, which is physically more imperative and feasible in that city than in any other except New York.¹

A subway is indispensable to rapid transit in a metropolitan city; municipal ownership is the logical method of control because the easiest method of directing the whole transportation service. See Boston first!

NEW YORK'S FIRST SUBWAY

New York City presents the *pons asinorum* of all American communities, because of the great congestion of population due to Manhattan's insularity. Many an asses' bridge was

¹ Cleveland, St. Louis, San Francisco and Los Angeles are all facing municipal subway construction.

built before New York learned how to cross the river without going near the water. In consequence New York has a very imperfect system of urban transportation. The railway stations and ferries are difficult of access, and not even coördinated by the surface railway systems. After waiting for years for the installation of more rapid communication by elevated systems, these became, by the persistence of the use of steam, nearly as belated as the cross-town horse cars. After surrendering valuable privileges for little or no remuneration, the city retained no power for the compulsion of better service. After waiting for the installation of a cable railway it was constructed when it had elsewhere become antiquated. After attaining archeological supremacy New York has recently introduced improvements of great individual consequence, though unfortunately still without coördination. The Brooklyn Bridge Railway furnished for a time the one example of a municipally owned railway in the country. The lease of this railway to the Brooklyn Company, in order to substitute New York for Brooklyn terminals marked the beginning of the penetration of the lines of other boroughs into Manhattan, and the substitution of through for radial routes.

There can be no satisfactory rapid transit while downtown streets are used for switching cars.

Motor omnibuses are running on Fifth Avenue. Compressed air cars have supplanted horse cars on Twenty-eighth and Twenty-ninth streets. The great trunk lines of Manhattan are now operated by the underground electric conduit, the best form of surface transportation as yet devised in this country. The fact that the overhead trolley should be unknown on Manhattan Island is so notable an advance as to neutralize somewhat the primitive forms of transportation still persisting there. The latest of New York's improvements, still in process of construction, are the subway and tunnel systems. In the face of Tammany's mismanagement the final decision to have municipal ownership of the subway speaks volumes for the education of public opinion in the land of Boss Tweed, though the method of control by surrendering all rights to a private construction company for fifty years, is inferior to the method of Boston, and unfortunate after the encouraging experience of that city.

The subway jest about being able to go to Brooklyn without being seen represents quite seriously the length of vision of the Tammany-ruled New Yorker. Boston is even more remote than Brooklyn.

Jacob Riis said that it takes ten years to do anything in New York. This has proved to be true not only of playgrounds, but of subways. In 1891 the city secured the rapid transit investigation. In 1901 the construction of the subway was begun. In the interval municipal ownership sentiment had been stirred up so effectually that the authorities could not quite give away the subsurface as they had the surface of their streets. Fifty millions of bonds were issued on the city's credit at $3\frac{1}{2}$ per cent to build the original subway, that in turn was leased to the contractor for fifty years, with a possible extension for twenty-five more. On its tenth anniversary the rental of the subway had brought New York twenty million dollars. At the expiration of the lease the subway will be paid for and belong to New York. The main line tunnels from the Battery to Harlem were completed in 1904 and the Brooklyn extension in 1908.

There were skeptics, but they were answered when a subway built for four hundred thousand passengers a day often carried a million.

Before the operation of the subway the elevated roads carried about half as many passengers as the surface lines. Three years after the opening of the subway the rapid transit passengers in it and on the elevated roads outnumbered those who used the surface cars. The virtue of rapid transit is shown by the fact that 75 per cent more people were carried on the elevated per mile of track than on the surface lines. Within three years of the opening of the subway, before the Brooklyn extension was put into operation, nearly three times as many people per mile of track were carried by rapid transit as on the surface. Rapid transit lines not only carry more people now than the surface cars, but they carry the average passenger farther.

Rapid transit relieves congestion. If the surface lines were owned by the city and run as feeders to municipal rapid transit lines, municipal ownership could transform the slums.

RAPID TRANSIT IN NEW YORK

New York's millions can now cross the East River dry-shod but they still have forty years before them in the wilderness. So successful has been the subway in annihilating distance and topography that it determines the future of rapid transit in New York. The Interborough Company, lessee of the first subway, bought the Manhattan Elevated lines, but that does not correlate the transportation systems of Manhattan alone. When the question of extending rapid transit arose the two great issues were: continuity of service among the different boroughs of New York and a satisfactory return to the city for its investment. Unification is still a dream. After years of dispute, a compromise was reached in 1913 providing for a dual system giving the Manhattan Company extensions in Brooklyn and the Brooklyn Rapid Transit Company extensions in Manhattan. The old subway is twenty-six miles in length with eighty-one miles of track. The dual system contracts call for forty-four and a half miles of new subway with two hundred and fifty-seven miles of track and fifty-three miles of new elevated road having seventy-seven miles of track.

Greater New York's rapid transit lines in process of construction are longer than the old, but the Promised Land is not in sight.

The old subway cost fifty millions; the new subway will cost one hundred and twenty-eight millions. The present rapid transit system covering all the boroughs but Staten Island cost \$250,000,000 and accommodates eight hundred million passengers a year. The new systems, including the full use of New York's neglected bridges, will provide for two thousand million passengers — more than now travel on all the lines of New York. The cost of these improvements will mount up to three hundred and twenty-five millions, exclusive of the cost of the bridges. The city's needs far outran its resources, so it was necessary to go into partnership with private capital to build the new subways. It was also imperative to begin to link together the unassembled systems of rapid transit in New York. Likewise it was desirable to gather up existing and projected franchises that they might terminate at the same time. Then, too, municipal ownership must be made more feasible if possible.

At a cost of three hundred and twenty-five million dollars New York moves a halting step or two toward the control of urban transportation.

The dual plan utilizes existing elevated railways and bridges that have hitherto been operated wastefully. It threatens the tyranny of the north and south travel on Manhattan Island. It extends the range of rapid transit for five cents so as to cover Brooklyn and give much longer rides in Manhattan and the Bronx. The city can, for the first time, command extensions. The city is to own the lines after construction and may recover the operation of them at any time after ten years. This privilege includes the right to operate them. The dual system will not be entirely paid for when the franchises expire, but complete municipal ownership is not impossible if the city is allowed to revise its taxation system.

New York has moved a long way since the Egyptian days of 999 year and perpetual franchises.

The city is not yet relieved of the necessity of paying for exorbitant franchise values of depreciated companies. It still is customary to pay fabulous brokerage charges for improvements made by the city with city money. The tax on the city's resources to provide rapid transit is so great as to restrict other needed improvements. The unearned income from the automatic increase of the patronage of rapid transit lines is added to the unearned increment of land values going into private pockets. New York is still bending its energies, its capital and its wits to overtaking earlier blunders. The future is still being mortgaged. Recent court decisions make the surface lines more chaotic than in a generation. New York is developing the most expensive rapid transit system in the world, under public control, with municipal ownership of rapid transit in the dim distance.

Nothing but complete municipal ownership can give New York a scientific transportation system. New York ought to have no trouble in finding a Moses!

SUBTERRANEAN CHICAGO

The windy city voted by referendum of the people in the spring of 1914 to "travel in the sunshine." The citizens of

the city of superabundant soot were impressed by the arguments used against a proposed subway system. Whether the fabric of the arguments was sunshine or moonshine remains to be seen. The particular subway proposals seem to have been unwise. Chicago is accumulating a fund under its new street railway franchises that is supposed to make a subway system easy and economical. George E. Hooker has published a convincing defense of Bion J. Arnold's proposed rapid transit use of Chicago's superfluous steam railway tracks. However, Chicago has had experience with subterranean methods that ought to enlighten it regarding the importance of municipal control.

Years of subterranean tactics in Chicago's city council have failed to produce a passenger subway.

The successful trolley systems of the anthracite coal mines suggested to some brilliant promoters the idea of a freight tunnel system under the congested streets of Chicago. A franchise was secured for the construction of a system of tunnels which should be used for the transmission of "sounds, signals and intelligence by means of electricity or otherwise." According to the leading scientific publication of America, "the work was begun in a very unostentatious manner." In fact, the city council supposed it was issuing a franchise for the building of a telephone conduit. The work was conducted so unobtrusively that three little openings sufficed to extract the superfluous earth which was carted away at night. Chicago waked up one morning to find twenty miles of freight tunnels under its feet, authorized by a misleading franchise granted in the middle of the night.

Even subterranean transportation facilities ought to be devised in the light of day.

"The transmission of intelligence" by other methods than electricity had beguiled the city council of Chicago into granting a privilege so elastic that it not only permitted an automatic telephone system to be inaugurated, but freight tunnels twelve feet high to be built. "Sounds and signals" have actually been transmitted in these "conduits" where freight cars have also been transported. The automatic telephone system has been merely a sand-bagging device over the telephone monopoly, but the freight system has become a great convenience, a

startling scientific achievement. Seventy miles of tunnels now honeycomb Chicago's subsoil. Every freight depot is connected; the post office is served; and most of the great warehouses and commercial buildings have direct service. One hundred thousand tons of freight carted through Chicago's streets may be eliminated; troublesome strikes of truck drivers may become fading memories; five times as much material is being carted away from basements as teams could handle; an elevated freight terminal covering eleven city blocks is connected by elevators with the tunnel system; the tunnels expedite the parcels post as the pneumatic tubes do letters.

The subterranean distribution of freight in Chicago is a triumphant success.

The franchise for "the transmission of intelligence by electricity or otherwise" provided that the floor of the tunnel should be forty feet below the surface of the street. Therein municipal ownership is proved to be indispensable for every activity that affects public property. The projected height of the tunnels — seven and one-half feet — left sufficient space below the street level for a double-decked passenger subway. The twelve-foot trunk tunnel compels the paradox of a passenger subway system built in part above the surface of the street, if Chicago is to avoid grade crossings in its subways. Chicago, which has dallied too long with its subway problem, now finds itself hampered by the secret rather than sinister appropriation of its subterranean space. Intelligence is now being transmitted in Chicago by electricity, *also* otherwise.

The city street must be under public control as far down as one can dig and as far up as one can think.

CHICAGO'S CHINA NEST EGG

Chicago, like Gaul, is divided into three parts. Its business area is circumscribed by the lake on the east, the river on the north and west, and railway yards a mile square on the south. These natural and artificial limitations have been intensified by the elevated railway loop, carrying trains from the three sides of the city about an inner quadrangle. After the fashion of most growing and unawakened cities, Chicago let out franchises to surface and elevated railways covering segregated geographi-

cal areas, but meeting in this restricted center. Chicago's fight to unify these illogical transportation units and to secure public control is an important chapter in municipal sociology.

The wolf that suckled Romulus and Remus was not of the same breed as the wolves that bled Chicago.

A graduate of the Eastern Penitentiary of Pennsylvania was the expert who first undertook to unify Chicago's transportation system. He bought the north- and west-side lines and by selling them to himself several times amassed a fortune. He had the assistance of Chicago's "gray wolves"—a majority in the city council—who were not graduates but promising novitiates. As the franchises began to expire municipality and state were manipulated and courts petitioned to keep the people from regaining their own. The state legislature extended the limit of new franchises from twenty to fifty years, but the citizens were able to prevent the granting of such franchises. The courts weakened the companies' case by declaring an old ninety-nine year act applicable only to horse cars. The courts also established the right of municipal ownership in Chicago, but they could not give the city financial power.

Chicago would have owned its transportation system by this time if it had had the rights granted by the state to private corporations.

The city repeatedly voted for municipal ownership and sought power from the legislature to finance the project. The law passed proved unconstitutional. So the city had to deal with private capital. Yet the companies were so shorn of power that they were compelled to capitulate by permitting water to be squeezed out of their stocks. The elevated system was not involved. The surface railways were appraised at fifty millions. New capital was to be added to the original valuation as needed. The city was to have the option of purchase and operation at the end of any six months' period by payment of this price. The companies were to be allowed 10 per cent for contractors' profit and 5 per cent for brokerage. Fares were fixed at five cents for adults, three cents for children. Universal transfers were to be given except in the business district; through routes were provided for. While the companies operated the lines they must be allowed 5 per cent on capital, 55 per cent of the net profits going to the city to constitute a purchase fund.

Walter L. Fisher, city's counsel, and Bion J. Arnold, city's engineer, skillfully unraveled a great physical and legal tangle.

Chicago now has two unified systems of transportation, surface and elevated, with a single five-cent fare on each, from city limit to city limit. Lacking a system of subways, Chicago compares favorably with New York's chaos and unfavorably with Boston's single three-level system. It has received nearly fourteen million dollars of street railway profits to apply to municipal ownership. Meanwhile, the fifty million appraisal has been increased by rehabilitation and extensions to one hundred and twenty-eight million. The city gains fourteen million while the purchase price has grown seventy million. On that investment the companies are earning 8 per cent while the city gets $2\frac{1}{4}$ per cent on its money in the bank. If invested at 5 per cent, Chicago might have ninety millions in 1927, when the franchises expire, with which to buy a system which will then probably be worth two hundred million dollars.

Pigs is pigs; franchises is franchises; municipal ownership is municipal ownership.

PHILADELPHIA, Too !

All metropolitan cities are facing the necessity of subway construction. St. Louis has been authorized by the legislature to incur traction indebtedness. Philadelphia is meeting its needs with a boldness that has not been evidenced since the first street railway franchises were granted. The original Philadelphia franchises made municipal ownership possible. This was subsequently yielded and the company granted more and more privileges in view of the city's impotence. For one valuable extension of franchises the company agreed to sell strips of six tickets for a quarter with transfers. The company first withdrew the transfers and then the strip tickets. For a previous valuable privilege the company agreed to pave the streets on which its cars ran and remove the snow. These burdens, together with the licenses, have also been annulled.

Philadelphia sold its birthright for a mess of pottage, and then lost the pottage.

It is now proposed to be equally generous to the company in planning a rapid transit system at the expense of the city and

under municipal control. This system will include two elevated arms to be built by the Philadelphia Rapid Transit Company, of great value to them as feeders. It will include a tunnel to Camden, New Jersey, Philadelphia's most important suburb. The transit company will, of course, control this. The plan includes further a city-built subway connecting with the existing short private subway. It is proposed that the company shall spend eighteen million dollars for its extensions and improvements and the city forty-seven million dollars for building the subway. The company will receive 6 per cent interest on its investment and a preferential payment for losses incurred through a municipal link in the transit system, provided this does not exceed a half million dollars a year.

The company relinquishes its uncontrolled monopoly of urban transportation and a three-cent exchange ticket that is the Philadelphia substitute for a transfer. Experts, familiar with the intricacy of Philadelphia's transportation system, can ride down town and back for eight cents on one of these exchange tickets. Anyone wishing to cross any part of the city diagonally, however, has to pay eight cents for that privilege. This confusing and onerous system is to be eliminated and the company must be abundantly indemnified for its estimated losses. A division of the fares for passengers using both the private and public sections of the rapid transit system will give the company two cents and the city three cents for each five-cent fare,—another arrangement generous to the company. The great advantage that will come to the city will be a unified rapid transit system with universal transfers on a five-cent fare. Genuine municipal control of rapid transit is promised in 1964!

Philadelphians have voted ten to one a loan of \$6,000,000 to start Director Taylor's rapid transit system.

The greatest immediate gain is in a constitutional amendment authorized by the Pennsylvania legislature that is necessary for the satisfactory carrying out of these provisions. At the November, 1915, election the question will be decided whether, in incurring indebtedness for transit development and docks, Philadelphia may issue its obligations for 50 years instead of 30 years, and whether such remunerative investments may be excluded from the debt limit. This amendment will set free a large amount of Philadelphia's assets for public im-

provements. The completing of the subway will increase the taxable values because of the vastly superior rapid transit system. The ever increasing burden of exchange tickets will be eliminated. The city's residential area will be enlarged and its population made more efficient. The commercial and industrial growth will follow logical instead of arbitrary lines.

Rapid transit in Philadelphia will bear hard on the jesters as well as the grafters.

DETROIT'S STRUGGLE FOR MUNICIPAL OWNERSHIP

Detroit and Toledo are impressive examples of cities sacrificed to the fetish of private profit. They have been limited by antiquated state constitutions. They have been denied home rule. They have been throttled by the courts. Their struggles to control their transportation systems have been notable efforts at self-government. They are still struggling, not because of the failure of municipal government, of which undomesticated Americans are so boastful; they are the victims of the failure of private enterprise. From the days of Hazen Pingree and Sam Jones, devoted public servants have been hampered by the relentless enmity of transportation magnates engaged in a mischievous attempt to make the public pay dividends on values created by the public.

One does not blame an army for getting scratched on the enemy's barbed wire.

Before Tom Johnson went to Cleveland he became converted to municipal ownership by his experiences with Pingree in Detroit. Upon Johnson's defeat for re-election to Congress, he returned to street railway management, taking over a deteriorated Detroit railway. He rehabilitated it and managed it so well that he got control of Pingree's three-cent line. The five-cent system swallowed the three-cent system. The franchise compelled, and will compel until 1924, the selling of eight tickets for twenty-five cents on the streets occupied by Pingree's line. Johnson learned and proved to Pingree the futility of competition in urban transportation. A premature effort was made to buy the system for the city, but the people distrusted two of the most public-spirited mayors America has ever known.

Mayor Pingree's unsuccessful endeavors to deal with the

street railway companies of Detroit forced him reluctantly to the acceptance of municipal ownership.

As governor of Michigan, after three terms in the mayor's chair, he secured the authorization of a street railway commission with power to purchase and operate the railways of Detroit. The commission was appointed with Pingree as chairman. Negotiations were opened with the railways, but the supreme court of the state held the commission unconstitutional on the ground that the constitution of 1850 forbade the state to be "party to or interested in any work of internal improvement." The court held that this prohibited the granting of the right of municipal operation to a city, although the state could give those powers to private corporations. Thus as early as 1899 the personal prejudices of judges as to the propriety of municipal ownership seem to have been the only obstacles to the effective expression of the will of the people in Detroit.

It is always hard to beat the opposing team and the umpire.

Municipal ownership having to wait for the revision of the state constitution, Detroit tried to settle its transportation question by franchises. The campaign of 1906 became crucial, owing to the fact that over sixty miles of railway lines were covered by an expiring franchise, while nearly sixty were operated under the Pingree franchise that gave eight tickets for a quarter. A comparatively liberal franchise was inevitable, but ten tickets for a quarter during rush hours and six for twenty-five cents at other hours did not satisfy a people who had been educated to municipal ownership. They voted the franchise down 30,000 to 14,000. The new state constitution of 1912 gave the right of municipal ownership, and the citizens decided in April, 1913, by a vote of four to one to municipalize their railways. A new franchise, liberal beyond the dreams of New York or Kansas City, has resulted, but the people have now voted for municipal ownership. The Detroit United Railway has accepted the street railway commission's offer to assume the mortgages of \$24,900,000, paying no cash. The city must cover the mortgages out of the street railway earnings. Municipal ownership again awaits the people's vote.

The deathbed repentance of transportation magnates can evoke only crocodile tears from an enlightened public.

THE GOLDEN RULE AND HOME RULE IN TOLEDO

The commercial and political capitals of Ohio have steadily forged ahead coincidently with the progress of urban transportation. Cleveland was harrassed by a lawless corporation supported by the "best" citizens. Columbus had a severe setback from a street railway strike, in which a peace-loving mayor was opposed by belligerent business. Nevertheless, agitators, demagogues, patriots, and martyrs have secured for Cleveland a three-cent fare and for Columbus eight tickets for twenty-five cents on a sliding scale of dividends and fares that guarantees justice to everybody.¹ Meanwhile "business" methods have been triumphant in Cincinnati and Toledo. In the former city there has been a steady retrogression, while its rivals have been advancing. It is also the only city in Ohio to be hampered by a fifty-year franchise, temporarily made possible by a corrupt legislature. An undesirable suburban franchise was voted on by referendum in March, 1915, and turned down by an overwhelming majority. The election cost the city \$23,000 and was made significant by the apparently incurable stupidity of the faction that recommended the franchise with the slogan, "Business or Bigelowism." A rapid transit commission has at last been appointed and a \$7,000,000 municipal system is projected. In Toledo the street railway company has preferred to carry people free rather than obey the law, because seven successive terms of reform mayors have not won the support of big business.

Business is business: it is not service.

It was under "Golden Rule" Jones that the question of the renewal of the street railway franchises began to be agitated. The conditions were similar to those almost every large city has experienced. The companies had secured franchises in the old days of horse cars; had adopted electricity by economic necessity; had inflated their values in the process; had made no provision for depreciation, yet expected the people to foot the bills for incompetent management, to pay interest on the

¹ The new Columbus franchise required the expenditure of \$1,000,000 in improvements and the increase of tickets from seven for twenty-five cents to eight for twenty-five cents when the gross annual income should reach \$1,750,000. It is under these conditions that Columbus has been enabled to get eight tickets for a quarter.

values created by the public alone, and to extend the franchises prematurely. When the companies wanted to renew the franchises for twenty-five years, Mayor Jones vetoed the ordinance. A typically subservient council would have passed the franchise over his veto but for a formidable physical protest of the populace.

The golden rule was a novelty in street railway dealings.

After Jones's death the traitorous council granted the company of speculators a renewal of their privileges. The acting mayor vetoed this ordinance and only menace of numbers intimidated the council. Under Mayor Whitlock the three-cent slogan of Tom Johnson was made popular. The Chicago Settlement franchises of 1907 had pointed the way to rigid public supervision and ultimate municipal ownership. Cleveland was making progress toward a three-cent fare. The Toledo company had a capitalization of \$30,000,000 on a \$5,000,000 investment. It was a merger corporation and operated as two systems because one of the old franchises compelled the selling of eight tickets for twenty-five cents for use morning and evening. The company forfeited all right to considerate treatment by refusing to have a valuation set on its property by impartial experts. Meanwhile the franchises were expiring.

It is a commentary on American complacency that a company with no rights in the streets still demands privileges.

The city solicitor, Mr. Cornell Schreiber, drew up an ordinance which was passed by the council giving the company license to use the streets conditioned on a three-cent fare. The company offered a franchise showing the change of sentiment resultant from the long agitation. It agreed to carry adults for tickets sold five for fifteen cents and children under eight for one cent a ride for a year, while a city commissioner worked out an equitable rate of fare for the following five years. Municipal ownership was made possible on twelve months' notice. The people have voted for it once. The legal limitations on the city and the discontent of the people make agreement almost impossible. The court has decided that a straight three-cent fare is inadequate with the present receipts and expenses.

Toledo's civic and commercial progress has been almost suspended because it lacks home rule in its streets.

CLEVELAND'S THREE-CENT FARE

The wailing of street railway men throughout the country is amusing or disgusting to the individual who finds three pennies dropped in a box in a Cleveland street car adequate to carry him the length of that great city. If this is possible in a city of over half a million inhabitants, occupying a wide expanse of territory, why is such bad service given for five cents in most American cities? If New York's and Philadelphia's perpetual franchises require five cents from each passenger with very imperfect transfer privileges, how can Cleveland's ordinance, menaced by municipal ownership, give universal transfers for three cents? The answer may be that sometimes one must pay one cent on a three-cent fare for a transfer in Cleveland, as contrasted with the regular custom of paying three cents for a transfer on a five-cent fare in Philadelphia. But the practice in Cleveland is based on a sliding scale determined accurately by earnings and controlled absolutely by a city commissioner.

The most liberal franchises always result in the worst service and are generally held by the worst rascals.

By the Tayler Settlement Cleveland got three-cent fares, with municipal ownership in prospect. Judge Tayler proposed a schedule of fares based on a normal \$500,000 cash operating balance that may never be diminished below \$300,000 and never increased above \$700,000. A sliding scale of fares is provided for a single continuous ride within the city limits. Starting with a three-cent fare and one cent for a transfer, the penny is to be rebated if the income warrants it. If the income is still above the \$500,000 cash balance, tickets are to be sold two for five cents instead of five for fifteen cents. If the income falls so that even the one cent for transfer is inadequate to maintain the balance, then a four-cent fare, with three tickets for ten cents, is established. Thus the fare slides up or down exactly in proportion to income.

High-handed financiers scoff at self-appointed reformers as "tailors of Tooley Street," but they sit silent before Judge Tayler representing the people in Cleveland streets.

The fact that Cleveland leads metropolitan cities to-day in the cheapness of street railway fares is due, as every one knows, to Tom Johnson. While all of Cleveland's respectability was

heaping anathemas on this railway expert, while one heard at Cleveland's business men's clubs encomiums for Pat Calhoun, the San Francisco railway grafter, and execrations for Cleveland's benefactor, this plucky public servant was laying down his life to give his city adequate and cheap transportation. Like every other reform mayor he had to spend his life in over-specialization because of the malicious opposition of those who ought to have been his and the city's friends. Johnson was elected mayor just prior to the expiration of many of Cleveland's street railway franchises. As a successful railway magnate he brought to his task unusual knowledge. He doubtless made mistakes due to the intensity of the conflict, but he shall be known by his works.

Tom Johnson said, "The only good franchise is a dead franchise," and he never deserted the bedside of expiring franchises.

Limited by the laws of Ohio, opposed by legislators of the state who robbed his city of home rule, Johnson was compelled to resort to competition. The Forest City Railway Company was given a franchise on routes where the older company had no longer rights. This property was leased to a holding company at 6 per cent, with the requirement of three-cent fares and universal transfers. In 1908 this company with sixteen miles of track was given the operation of all the street railways of Cleveland, subject to public referendum. An inspired strike of employees brought about an adverse referendum and the holding company went into the hands of receivers. The mayor persisted in starting rival lines, but after years of desperate opposition and repeated campaigns for re-election, a compromise came in the form of the Tayler Settlement.

Cleveland now enjoys the sliding scale of fares, vibrating about the three-cent unit (five cents to three suburban districts), control by the street railway commissioner, arbitration of all disputes, and the compelling power of ultimate municipal ownership.

Some day every city in America will establish a memorial to Tom Johnson in the form of a street railway system serving the citizens at cost.

SAN FRANCISCO'S MUNICIPAL RAILWAY

Rome on its seven hills was simple and primitive compared with San Francisco on seven and seventy hills. The early plan of the city followed slavishly American tradition. William Penn's prosaic gridiron system of streets was imposed on those multitudinous hills, making the transportation problem more difficult than that of New York or Pittsburgh. The original public vehicle of San Francisco was the omnibus. Horse cars were introduced in the 'sixties, to be supplanted by cable railways in the 'seventies. While these were in process of development a new state constitution was anticipated by the companies which received fifty-year franchise extensions. Railways multiplied before and after electricity was introduced so that by 1895 there were seventeen different street railway systems in San Francisco. Consolidation then became imperative, and in 1902 all systems except three were included in the United Railways.

The sins of the fathers shall be visited upon the children unto the third and fourth generations.

At the dawn of the twentieth century municipal ownership had penetrated the minds of San Franciscans. The new city charter made municipal purchase of public utilities possible. This was inspired by the high-handed methods of the United Railways that had been organized by familiar New York devices involving financial obligations no corporation could meet and serve the public adequately. The company had suffered from the fire and from a subsequent strike and would have had the sympathy of the people but for the entanglement of the railway officials in the graft revelations that aroused San Francisco from its lethargy.

The straight and narrow path ought to have been easy in San Francisco streets, but for ways that are devious Bret Harte's Heathen Chinee has had no monopoly.

As early as 1896 the Supervisors of San Francisco had attempted to extend the franchise of the Geary Street Railway, but the court decided it was not legitimate more than a year before its expiration in 1903. With the charter revision giving the city authority for municipal ownership, agitation to municipalize the Geary Street road began. The first referendum in



MUNICIPAL TROLLEY CAR, SAN FRANCISCO.



Photograph by the Heiser Company.

THREE PENNIES OR FIVE TICKETS FOR FIFTEEN CENTS!
Cleveland.



1902 proposed an electric conduit system in substitution for the antiquated cable conduit at a cost of \$700,000. The necessary two-thirds majority was lacking, although the vote was 15,000 to 10,000. A second election was lost in 1903 by a vote of 14,000 to 10,000. The third election, June, 1909, fell short of a two-thirds majority by only 203 votes. The fourth election in December of the same year was carried overwhelmingly, 28,000 to 7000, although the bond issue now amounted to over two millions. The rebuilding of the road was begun in 1911; court decisions gave authority to continue the road down Market Street, where most of the lines converge, to the Union Ferry Station.

In December, 1912, the municipal system began to operate. Although the agitation was sufficiently prolonged to educate the people to a due appreciation of the difficulties of municipal ownership, the conditions were not at all ideal. The franchise values of the United Railways made general municipal ownership impracticable for the moment, but the inability of the company to cover depreciation due to the fire and strike made them vulnerable. They would have been entitled to sympathetic consideration had their officials previously shown sufficient honesty and efficiency. As it is, the people are determined to make even partial municipal ownership a success.

The Geary Street wedge is making a big opening.

In August, 1913, an additional bond issue of three and a half millions was voted for extensions and for taking over the Union Street line, the franchise of which expired in December, 1913. Operating only these two limited lines, the city's receipts the latter part of the first year were \$1902 daily on the Geary Street line and \$958 daily on the Union Street line, as compared with an average daily return of \$473 for the first seven months of the Geary Street road's operation.

Both lines had antiquated equipment; the Geary Street line ran only to Market Street; the Union Street line from the Ferry Station skirted the business area on the north so that it did not tap the rich patronage of the United Railways. The city promptly extended the Geary Street line to the Ferry, put on new cars, and ran them not only all the way across San Francisco to the ocean, but established branch lines. The old cars were continued on Union Street. The building of a tunnel on Stock-

ton Street gave the city the opportunity to add a rapid transit line that would run from Market Street through the tunnel and over the Union Street tracks to the Panama-Pacific Exposition. A franchise to build the tunnel had been granted in 1907, but the company failed to use it, and it proved a gold mine to the city. Costing \$430,000 it has given the favored route to carry the big crowds to the Exposition. The city also built an emergency line out Van Ness Avenue, that gives the Geary Street route connection with the Exposition. With a small fraction of the mileage of San Francisco, the municipality has the two best lines to the Fair. For the year 1914 the receipts were over a million dollars. The net revenues, after making all comparisons with a private company, even including what the city does not have to pay, were over \$112,000.

The motormen and conductors, working an eight-hour day, earn more than the employees of the private company.

San Francisco is building another tunnel of vastly greater proportions that will not only open up a 7000-acre undeveloped residential section of the most desirable character, but give it a great leverage on the United Railways. The Twin Peaks, 1000 feet high, crown Market Street, San Francisco's central thoroughfare. They are being pierced by a tunnel over two miles long, to be traversed by express trains in five minutes. The total cost of this big municipal venture is nearly four millions, most of it assessed on the property to be developed. There will be two stations en route with passenger elevators, so that the side of the mountain may be used for residences. It will be possible to continue the tunnel as a subway under Market Street if desired. The United Railways will probably be permitted to use the tunnel on adequate rental, but it is primarily to extend the Municipal Railway service.

Eternal vigilance is the price of peace, but aggressive operation is the price of municipal ownership.

NOTE. — The Philadelphia referendum, referred to on page 45, was decided affirmatively.

CHAPTER IV

THE CITY STREET

THE TRANSMIGRATION OF PAVING

If all roads used to lead to Rome, all public services have hitherto led to the city street, and all city streets lead to the City Hall. The municipal expert must get as tired hearing about Roman roads as the Greek did at the reiteration of the justness of Aristides. In view of the road building of the ancients it is a commentary both on the lateness and speed of municipal development that progress in street construction is so spectacular to-day. Twenty years ago street making was in its infancy. The best paved streets of Europe were made of wooden blocks — the most expensive material in countries of scant forests. Now even in the land that uses ten times as much lumber per capita as France wooden pavements have several and serious rivals. At the beginning of the twentieth century in this country asphalt was in demand wherever it could be afforded. It is now being superseded by better pavements and each year may witness new paving material supplanting old.

Street paving has advanced more in twenty years than it did in twenty hundred.

American streets were formerly paved as a last resort; they were paved with the cheapest material if possible, with the most durable if necessary; the paving was laid with emphasis on the surface rather than the foundation; it was promptly torn up to put in forgotten pipes or wires; then it was left to rot; and after the street had long been impassable another pavement was laid. The materials of Europe were employed but European methods were followed very remotely. Philadelphia, New York and especially Baltimore freely used cobblestones — the worst of durable pavements. Chicago, Detroit, Superior and other western cities used cedar blocks laid on boards — the worst of

perishable pavements. The eastern cities named and others used granite blocks where the traffic was heaviest, but laid it so badly it was often little better than cobblestone.

Municipal housekeeping was in the hands of ignorant servants.

The economy of good street paving is being rapidly appreciated in American cities. Recent improvements here, as well as the longer years of European experience, tend to demonstrate the importance of a twofold principle: good paving consists of a substantial, thoroughly drained foundation, covered by a water-tight surface kept constantly in repair. Macadam, wood, brick, concrete, stone, asphalt and other surfaces are merely top dressings, which, if laid on a solid foundation of concrete and kept in repair, will insure good streets, requiring only in each case to be adapted to the particular needs of certain quarters of the city.

When one thinks how recently the newer American cities began to pave their streets the extent of street paving is truly encouraging. But when one compares the materials and the character of paving in different cities, their methods seem incredibly erratic. Boston is the only city that reports virtually no streets unpaved, but 73 per cent of Boston's 500 miles of streets have a nondurable pavement. A still larger percentage is found in the suburbs, the population of which is as great as that of Boston. Greater New York, which has three-fifths of its paved streets covered with durable pavement, still has over one-third of its streets outside of Manhattan unpaved. In Chicago, where durable paving now preponderates over nondurable, nearly half the street mileage is still unpaved, but Chicago's enormous area makes it responsible for almost 3000 miles of streets.

New York's or Chicago's streets would span the continent.

Philadelphia, with almost 2000 miles of streets, has only one-sixth paved with nondurable pavement, but has one-fourth unpaved. St. Louis divides pretty evenly the streets that are unpaved and those that have durable and nondurable pavements. Cleveland has paved more than half of its nearly 700 miles of streets exclusively with durable pavement. Pittsburgh has a similar record for its 1000 miles of streets and alleys.¹ It cannot be said as yet that there is any system in American street

¹ Detroit, Buffalo, San Francisco, New Orleans and Kansas City have very little nondurable pavement, but many miles of unpaved streets.

paving except that the materials used are much better laid and much better maintained than formerly.

It is easier to come down the pike than it used to be.

GRANITE AND ASPHALT

The original substantial paving in American cities was cobble-stone. The Atlantic seaport cities used this as the most available material because it was brought over as ballast in European ships. It was succeeded by granite or Belgian block, that is still used widely because of furnishing the most satisfactory service for the heaviest traffic. Well "dressed" or "faced" blocks make a surface that facilitates ease of hauling, although it is noisy and uncomfortable for lighter vehicles. The use of Belgian block varies with the accessibility of granite or similar stone and the uses of the street. Philadelphia and New York each have nearly 400 miles of street paved with Belgian block. Pittsburgh ranks next with 230 and San Francisco follows with over 100. The practice in these cities is due to their topography or the narrowness of early streets, causing congestion of traffic. This explains why Jersey City has 80 miles of granite block, and why Boston has only 96. It is not creditable to municipal finance that the cost of laying Belgian block ranges from \$4.25 a square yard in Buffalo to fifty-five cents in Manchester, New Hampshire, although its cheapness in the latter named city is due obviously to the nearness of granite quarries.

Traffic streets must be paved regardless of cost.

Granite block is serviceable for so few streets in the average city that there has been a very wide use of sheet asphalt. This pavement has given such satisfaction for many purposes that it had promised to supersede others until the cities became dissatisfied with the methods employed by those who promoted its use. Sheet asphalt is a term applied to pavements in which the usual macadam or concrete foundation is surfaced with a thin layer of asphalt mixed while hot with sand or pulverized rock. It is a pavement that lends itself to comfortable use by any vehicle. It is easy to keep clean and comparatively noiseless. The chief objections are its refraction of heat, and its slipperiness, making it a dangerous pavement for horses in wet weather and one on which auto vehicles easily skid.

The cost of this pavement is almost as erratic as that of Belgian block, varying from \$1.28 a square yard in the Borough of the Bronx, New York, to \$3.25 in Boston. The average cost is midway between these sums. Nearly 200 miles of sheet asphalt are laid or relaid every year.¹ Asphalt seems to be following the Star of Empire, as it is used increasingly in western cities, while being abandoned in eastern cities. This is due not only to the blunders of the asphalt promoters and the competition of other kinds of paving, but also to the use of the material in another form — block asphalt. New York has 132 miles of this paving and many other cities have experimented in it. Its cost is about the same as that of sheet asphalt.

Most cities with over 20,000 population have had their fling with asphalt.

OTHER SUBSTANTIAL PAVEMENTS

An early competitor of sheet asphalt among substantial pavements was brick. It is used very extensively in small cities where Belgian block has never been employed. It is also improving constantly as superior vitrified brick is made. Brick is noisier than asphalt, but not so noisy as Belgian block. It is comparatively easily cleaned and suitable for fairly heavy traffic. When properly laid on a good concrete foundation, it ought to last fifteen years. The cost of brick paving varies from \$1 in Akron, Ohio, to \$3.80 in Butte, Montana. Cleveland leads in the amount of brick paving with 261 miles.²

There is no geographical limitation to the use of brick except that a clay bank is handy.

A cheaper surface and a comparatively substantial paving has been discovered in concrete. This material, that has been used as a foundation for most good pavements, is discovered to be satisfactory also as a surface. Sometimes it is laid with a protecting coat of bitumen, sometimes without it. It costs no more than macadam and has almost the serviceability of the

¹ The cities that have used asphalt most extensively are New York (812 miles), Chicago (468), Philadelphia (464), Buffalo, Pittsburgh, San Francisco, Washington, D.C., and Kansas City, Missouri, these cities alone having 2500 miles of streets paved with sheet asphalt.

² Philadelphia, St. Louis, Columbus, Toledo and Detroit each have over 100 miles of brick paving.

costly pavements. When the bituminous surface is omitted, it is not so resilient as asphalt or creosoted wood block, and it has a greater glare than either. At an additional cost of ten cents a square yard a thin surface may be added to remove these objections, but requiring frequent renewal. Sioux City and Mason City, Iowa, and Ann Arbor, Michigan, testify that concrete with a thin surface dressing is the least expensive pavement in the long run. The concrete pavement in Sioux City is only five inches deep, but that is due to a very favorable subsoil.

Corn is not the only thing for which Iowa's soil is good.

The experiment in Ann Arbor was due to the city engineer's prolonging the life of asphalt block pavements by covering the surface with a thin coating of coal tar and sand. The result was so satisfactory that he inaugurated the plan of using it on a mere concrete base. After the concrete has hardened the surface is sprinkled with hot bitumen, just as oil is now applied to roads. In 1910 Ann Arbor laid its own pavement by city labor at a cost of ninety-four cents to \$1.16 per square yard. The success and economy of this pavement have caused it to be used very extensively by street railway companies between their rails. Many small Ohio towns claim to have used concrete pavement for fifteen or twenty years and that it is still giving satisfaction. So large a city as Kansas City, Missouri, has been experimenting on the heaviest traffic streets and reports success.

The experience of some eastern cities would indicate that an Iowa subsoil is necessary for a successful concrete pavement.

Another competitor has arisen to contest the preëminence of substantial paving. Bitulithic pavement is a surface of bituminous concrete — a cross between macadam and asphalt. The coating of small stone chips makes this pavement more satisfactory in wet weather than asphalt. It is, nevertheless, smooth, easily cleaned, as noiseless as any paving, and much more satisfactory for steep grades than other smooth pavements. It is not satisfactory for heavy traffic, but is much superior to macadam in residential districts and has a serviceable life of ten years. It costs about the same as asphalt. St. Louis leads with 34 miles of bitulithic pavement, Portland, Oregon, following with 31 miles, but many cities east and

west have found satisfaction in the small amount that they have thus far introduced.

Bitulithic pavement is a patented luxury.

WOOD AND MACADAM

An expensive but very satisfactory pavement, on account of its cleanliness and noiselessness, is creosoted wood block. This most popular pavement in European cities is still the most expensive in America, in spite of our abundant forests. The cost is generally over \$3 a square yard. Minneapolis has sixty miles of creosoted wood block, Indianapolis and New York each over twenty. This is not to be confused with the wretched cedar block pavement of earlier days which gave scarcely better service than corduroy roads. Minneapolis lays the smoothly squared yellow pine blocks on a foundation of six inches of cement concrete, over which is spread a one-inch cushion of sand. The work is all day labor, paid for at the rate of \$2.40 for an eight-hour day, and the cost is about \$2.50 a square yard. The pavement laid in 1902 is still giving satisfaction.

What Minneapolis has learned from creosoted wood block might be applied to any pavement elsewhere. The materials must be satisfactory — the best wood and oil — and also the amount of oil and its treatment. The blocks must be laid and the joints filled properly, and the pavement constantly cared for. In spite of the expensiveness of this pavement, there must be 500 miles of it in American cities now. For satisfactory service it should be sprinkled with sand in wet weather, which indicates that it cannot be used on excessive grades. It is, therefore, an ideal pavement on the main streets of large cities where there must necessarily be an expensive pavement.

Three generations of wood — corduroy roads, cedar block, creosoted pine!

The most extensive paving in American cities is macadam, on account of its cheapness. Macadam has been greatly improved by using oil instead of water as a binder. Sacramento blazed the way in this experiment, and the country roads of California and park drives of many cities west and east have been benefited by the process. The use of oil for the laying of dust is partly responsible for the experiments in oil-bound macadam.

There is now no excuse for dusty roads or water sprinklers, as oil may be applied so that for ordinary traffic the macadam road is pleasanter than any other kind. The most extensive use of oil or tar as a dust preventive is in Boston, where 6,000,000 square yards (between 300 and 400 miles) of road are so treated.¹

Oil is good for troubled roads as well as troubled waters.

TEARING UP AND DOWN THE STREET

The advent of the automobile has ushered in a new era in street making. Motor cars and trucks are very injurious to any pavement. But their multiplication has necessitated a constant increase and improvement of paving. The damage to the streets by the joy riders or jitney drivers may be inevitable, but before they began tearing down the street the public utility corporation was tearing up the street.

One of the most diverting municipal pastimes is tearing up the street just after it has been laid. This is an almost universal practice of city authorities and private corporations to test out American pavements. No pavement has yet been discovered that can stand the test. The best foundation and surfacing, with a proper backbone to give drainage into the gutters, can never again be as durable after it has been cut open for pipes or conduits. This has been mainly due to lack of respect for street paving and the incredible privileges conferred upon private corporations. A Chicago Commission on Downtown Improvement, appointed by the city council, discovered that ten acres of pavement on the downtown streets are torn up every year at an expense of over \$200,000.

A street with a broken backbone is little better than a spineless man.

Cities usually have no adequate record of the subsurface contents. Philadelphia and the Borough of Brooklyn have made complete surveys of underground structures so that they can now be located as well as those above the surface. Most cities have regulations providing for advertisement notifying corporations and individuals that work must be done before the street

¹ The other cities that have treated more than 1,000,000 square yards of street are New York, Buffalo, New Bedford and Los Angeles. Kansas City, Detroit and Portland, Oregon, are treating over one-half million square yards.

is paved, but these have not been enforced. Cincinnati has a good law providing that the two final steps in legislation for the improvement of the street shall be indicated to all public service corporations. They are notified again when the bids are received and when the contractor is ordered to begin work. Thus they have ample time for repairs, renewals or extensions. A pavement may not be opened for three years after laying except in certain emergencies, which make unhappy loopholes for former methods. If a street does not include the necessary water and sewer mains, they must be put in before it is paved, and property owners must make their house connections whether there is a house or not. Otherwise, the city makes them and assesses the cost on the property. This is preliminary to the method that will some day be employed by all cities of putting in comprehensive conduits and tunnels and permitting no private agency to disturb a street.

A loophole that provides for a belated manhole guarantees a mudhole.

OVERHEAD WIRES

The disfigurement of American city streets by poles and wires has been due not only to the expense of constructing conduits, but to the increased burden of a number of separate systems of wires. The persistence of antiquated competitive methods has led to the granting of franchises to more than one company for the same service in the same street. It is not invidious to cite Los Angeles as an awful example because it has also led western cities in putting its wires underground and introducing ornamental lighting. Los Angeles was at one time afflicted with two trolley companies, two telephone companies, two telegraph companies, three electric light companies and police and fire alarm services.

The city of the angels has begun to clear the heavens.

The underground conduits in St. Louis are now used by fifteen separate organizations, those in Boston by nineteen organizations. The progress of putting wires underground in the face of these difficulties has been most gratifying. Boston has improved upon Los Angeles in carrying a large part of the growing volume of electrical circuits in its subway trenches or on the bridge by which the subway system crosses the Charles

River. Chicago has found the conduit system so great a protection against storms, fires and other interferences with overhead wires that the telephone company has voluntarily put wires in subways in the residence districts.

A quarter of a century ago the National Electric Light Association resolved "that the scheme of placing electric light and power cables underground is commercially impracticable."

The economy of conduits is evidenced especially in the small cities that have built them. Utica, New York, a city of about 70,000, has a municipal system of ducts that provided in 1907 an annual rental of nearly \$2000 for the use of 51,000 feet of ducts costing about \$19,000. The little town of Penn Yan, New York, has built a conduit less than half a mile long through the street that contains most of the business houses. It provides for both high and low tension wires. The municipal lighting system of the village uses the conduit, along with the telephone and telegraph companies. The latter pay five cents per duct foot per year. Other companies have evaded this requirement by using side streets.¹

The number of cities in which there are private conduits is legion.

NEW YORK'S BURIED WIRES AND HOPES

The initial step in burying wires was taken in 1883 when the Board of Aldermen of New York City passed an ordinance requiring the Western Union Telegraph Company to pay the city one cent per lineal foot of street opened for wires or tubes and to give the police and fire departments each the use of one free wire. The first subways for this purpose were constructed in 1886 and the companies were required to pay the expense of the municipal commission and of the construction of the subway. These companies were absorbed by the Consolidated Electrical and Subway Company. Its franchise provided that the city should receive all revenues over 10 per cent of the net earnings. In 1890 the Board of Electrical Control dictated the rental to be paid by corporations to the Consolidated Electrical

¹ Cities that have built over 100 miles of municipal conduit are Detroit, Milwaukee, Chicago and Philadelphia. Cities with over 50 miles are Seattle, New York and Boston. In all of these except Philadelphia the conduits are for the use of the city only.

and Telegraph Subway Company, but the bookkeeping of the company had not by 1900 indicated higher profits than 6.28 per cent. When it was found that high and low tension wires could not be operated in the same conduit without danger, the Empire Subway Company was chartered to develop a low tension system. They have not even had to report what their profits have been.

The New York public still enjoys the fate that Commodore Vanderbilt is reported to have prescribed!

When the underground conduit trolley system was introduced there was need of another extensive development of conduits and subways. The Metropolitan Street Railway Company was granted permission to put down conduits for its own use, and it was discovered that the provision was much greater than the trolley system required. Other underground construction in New York has been made by the Tubular Dispatch Company, which began to provide for the transmission of mail matter by tubes in 1897 under an old charter obtained from the legislature in 1874. As the consent of the Commissioner of Public Works had to be secured before the company could lay tubes, he insisted on a payment to the city of a percentage of the gross receipts — 2 per cent for the second year. The Manhattan Refrigerating Company also buries pipes, for which it is supposed to pay 5 per cent of its gross receipts to the city. There has been no endeavor to use the subways of the Rapid Transit system for the pipes and wires that could easily be incorporated in its tunnels.

The latest estimates indicate 18,000 miles of electrical conduits and subways, but no effective control.

BALTIMORE AND WASHINGTON

One notable by-product of the Baltimore fire has been the burying of her wires. Baltimore not only has a larger municipal conduit system than any other city, but probably has done more than all of the cities in America in municipal provision for buried wires. The Electrical Commission is spending \$2,000,000, of which half a million was spent in 1913, on a subway system for wires. Up to January, 1914, Baltimore had built 178 miles of conduit. There is a separate system of 26½

miles of conduit for fire and police telegraph. The telephone company has over fifty miles of its own conduit. Nearly 3,000,000 feet of cable are operated in the municipal conduit system, giving the city an annual revenue of \$128,000, which does not include \$15,000 that ought to be credited to the city for the municipal services carried in the conduits.

This has all been done in spite of the necessity of operating through three commissions — electrical, paving, and opening streets commissions.

The city of Washington has dealt more effectively with its overhead wires, including trolleys, than any other city. Up to June 30, 1913, the street railways had nearly 1,000,000 feet of conduit, the telephone company nearly 700,000 feet and the telegraph companies nearly 100,000, making a total of 1,800,000 feet, not including over two miles of Federal conduit and pipe lines. The result of this comprehensive system is to give Washington not only the protection of these indispensable services against storm and fire, but the best looking streets in America. The sleet and slush of Washington's mild climate make a severer test of the merits of buried wires than the wind storms and blizzards of northern and western cities.

In the disposal of overhead wires Washington excels in civic art, Baltimore in municipal science.

COMPETITION IN MUNICIPAL LIGHTING

The dimly lighted cities of earlier days excelled primitive cities only in the number of their feeble gas lights.¹ The lighting of cities is an art, as well as a science, in which significant progress is confined to the period since the introduction of electricity. The brilliancy of electric lighting led to the invention of the gas mantle. This restored the fading profits of gas plants. The first experimental municipal gas plants were badly managed, — notably that at Philadelphia, — but still compared favorably in service and price with private plants. Private gas companies in Boston and Indianapolis are compelled to make low rates by sliding scale franchises. These permit an increased dividend whenever the price of gas is lowered.

¹ The first public lighting was installed in Baltimore in 1821, in Boston in 1822, in New York in 1823. Electricity appeared in 1878.

A public utility corporation makes most of its improvements under compulsion.

Reduction in the price of gas in large cities, like New York, Chicago and Philadelphia, to eighty-five cents or less is due largely to the competition of electricity. Indianapolis and some Ohio cities, near coal mines and in competition with natural gas, sell artificial gas for fifty-five cents a thousand cubic feet. The cost for arc lights in the Detroit and Cleveland municipal plants is about \$50 a year. Private corporations in Cleveland, Spokane, Toledo and St. Louis do as well. Topeka, Kansas, and some small cities furnish arc lights still more cheaply. Detailed comparisons are futile for the layman, as the efficiency of both private and municipal plants varies inexcusably. The most important considerations are that economy is almost universally due either to access to coal or the competition of municipal plants. The municipal gas plants of Richmond and Wheeling have not only paid for themselves, but continue to furnish cheap gas in spite of management that is not above reproach. Their service to other cities in demonstrating the possibility of municipal ownership has been invaluable.

If municipal ownership had the freedom of private enterprise, there would be no argument for the latter.

Philadelphia is one of the best lighted cities in the country. It is a city with numerous courts and alleys where lights are of great importance and it probably illuminates these obscure places better than any other community. This is in part due to the fact that nearly 24,000 gas lamps are furnished free to the city by the United Gas Improvement Company in consideration of the liberal privileges granted that corporation. The company's generosity is indicated in the substitution of incandescent mantles for flat burners on this immense number of lamps. The illuminating quality has thus been increased from 22 to 60 candle power.

Philadelphia paid for 19,000 gasoline lamps and for the administration of the Bureau of Lighting over half a million dollars in 1912. The city also paid \$3,000,000 in 1912 for electric lighting, half of which was for underground construction and maintenance. There is a movement to have gas substituted for gasoline because this service comes under the city's contract

with the United Gas Improvement Company and would involve over \$400,000 worth of extensions to the physical plant that will become the property of the city in 1927. One of the results of this complicated system of private lighting is that Philadelphia has many lamps in unpopulated regions and sometimes lights of two systems side by side. Philadelphia has about the same number of electric lights as Chicago, which gives it a great advantage over its smaller area, having 108 lamps per square mile to Chicago's 77. The superior volume of light in Philadelphia is thus evident because Chicago has only about half as many gas lamps as Philadelphia.

The municipal departments are increasingly vigilant, but have to cope with antiquated franchises. Philadelphia has made a notable step forward recently in the organization of an Electrical Bureau under its Department of Public Safety. This means divided authority at present, but it results in an inspection work that will bear fruit. In 1913, 725 dangerous poles, 652 defective overhead wires, and many other menacing conditions were removed. Eight hundred and forty-five tests were made to see that the arc lighting system was adequate. Theaters and moving-picture shows are investigated by this department.

Philadelphia's yoke seems easy, for its burden is light.

New York is adopting the gas-filled incandescent lamp in place of the arc lamp. By displacing half of its 17,500 arc lamps in 1915 a saving of half a million dollars was effected. The magnitude of lighting in a city like New York is worthy of mention because it indicates the enormous extension of municipal services. Greater New York is lighted by a total of over 80,000 lamps, furnished by twenty-eight lighting companies. Over 30,000,000,000 cubic feet of gas is consumed annually, for which the public paid \$34,000,000 in 1913. At the same time it paid nearly \$30,000,000 for electricity. If the cost of electric transportation be added, we find that New Yorkers paid \$30 per capita for electric and gas service in one year.

Tribute cannot much longer be paid to private enterprise in the face of the wide success of municipal ownership.

Holyoke, Massachusetts, furnishes both gas and electricity from its municipal plant. While somewhat more than doubling its output in ten years and trebling the gas meters installed, it

has reduced the price of gas from \$1.35 to ninety cents (the private company had sold gas at \$1.35). Its output of electricity is ten times what it was when it began to operate the municipal plant. There are nearly twenty times as many patrons. The price of arc lights has been reduced from \$100 to \$45, and the net price of electricity to private consumers per kilowatt hour has been reduced from eighteen cents to six cents in ten years. South Hadley buys electricity from Holyoke at two cents, delivered at the town line. Holyoke, in buying the two plants, originally spent \$700,000 to which it has added over \$1,000,000. This success has been attained without introducing the latest economical devices for disposing of the by-products of coal gas.

Norwich, Connecticut, has a \$200,000 plant, furnishing both gas and electricity at a profit.

Duluth operates under its Water and Light Department a water and gas plant and is reaching out for electricity. In 1913 Duluth enjoyed a net profit from water of over \$132,000, and from gas of \$34,000, making a total of nearly \$167,000. Gas has been reduced in price from \$1 for fuel gas and \$1.90 for illuminating gas in 1898 to seventy-five cents for each in 1905. Gas is now sold for heating at fifty cents.

Municipal coöperation is safer than municipal perquisites.

MUNICIPAL ELECTRICITY

There is a constant increase in the number of municipal electric lighting plants. They increase three times as fast as the commercial plants, but their income does not advance so fast. The commercial companies control the big cities. In 1912 there were 3659 commercial lighting plants, an increase of 30 per cent in ten years, and 1562 municipal plants, an increase of 91 per cent, operating at a profit of over six millions.¹

Chicago owns a municipal electric light plant valued at about four million dollars, allowing one-third for its depreciation from the original investment. The actual cash cost of lighting an arc lamp is \$31.32 a year. With all expenses added to make comparison with private lighting, the expense is \$56

¹ See Appendix I for further comparisons of private and public plants.

a year. This compares favorably with \$75 paid for additional lights to a private company with a lower wage scale. Chicago is entering upon a new era in public lighting because of the service furnished by the Sanitary District from its power plant. This will increase the number of arc lights nearly 50 per cent and make still more formidable competition with private companies.

Cleveland's success with a three-cent fare on the street railway may have been responsible for its determination to furnish electricity at three cents per kilowatt hour (one cent to the largest consumers). A new \$2,000,000 plant gives Cleveland the latest scientific and economic facilities. Although it had already had electricity for four cents from an antiquated suburban plant, the new system effects economy by linking up four different plants. Of course Cleveland enjoys the advantage of easy access to both water and coal, but its economical municipal administration is partly responsible.

Electricity is cheap enough for cooking in Cleveland, and extended consumption will make it available for heating.

Three cents per kilowatt hour is not a utopian rate, as is shown by Kansas City, Kansas, which furnishes electricity for cooking at that figure. Jacksonville, Florida, remote from a coal supply, has a cooking and heating rate of two cents per kilowatt hour. This is the result of a profit in 1913 of \$350,000. In ten years' time the city put \$1,200,000 into extensions and improvements and \$600,000 into the city treasury. It is said that this contribution amounts to one-third of the city's taxes.

The New South is throwing light on municipal ownership.

South Norwalk, Connecticut, is one of the numerous eastern cities ranking with Jacksonville. For over twenty years it has furnished successful municipal electric light. It erected a modest plant in 1892 at a cost of \$20,000. The service was so satisfactory that the investment was duplicated in 1897 to furnish commercial lighting. Five successive enlargements followed. The management has been such that the floating debt is eliminated. A \$200,000 investment has been paid for from the profits, while selling electricity cheaper than any other plant in the state.

The Pasadena authorities estimate that in five years' time the competition of the municipal plant has saved the citizens

nearly three-fourths of a million dollars over what they might have paid. They were paying fifteen cents per kilowatt hour when the city began discussing municipal ownership. The price of the private company came steadily down until it reached seven cents, which is two cents more than Pasadena's municipal plant charges for lighting service. The private company that serves a large number of California cities has been hammering at Pasadena with a lower rate than it charges elsewhere. Arc lighting costs \$60 in Pasadena, compared with \$76 in Los Angeles.

Pasadena has had an illuminating history with its illumination.

SEATTLE LIGHTING

Seattle has an electric plant that has grown in a cumulative way during the eight years of its existence.¹ The Cedar River, from which Seattle's municipal light and power system draws its water, is a stream rising in the Cascade Mountains and flowing into Lake Washington, which has recently been connected by canal with Puget Sound. Water is stored in Cedar Lake, a mountain lake about three miles long, at an elevation of 1500 feet above sea level. The Cedar River flows through a rocky gorge for three and a half miles. Where it enters a level valley the generating plant is located. Power is transmitted to Seattle by two lines over thirty-six miles long.

In this case the mountain yields to Mahomet.

This immense supply enables Seattle to have exceptionally well lighted streets. Cluster lights are used for the most part, except in the parks where a single globe suffices. An eighty-candle nitrogen lamp is found to give the best service in the Seattle streets. Burning all night, there are 4000 burning hours

¹ The Seattle electric light plant was initiated by a bond issue of \$590,000 in 1902. In 1904 a quarter of a million was added to enable the plant to do commercial lighting. The patronage was so great that another bond issue of \$600,000 was authorized in 1906, and still another of \$800,000 in 1908. Then it became necessary not only to enlarge the plant, but to increase its power, which it secures from the Cedar River. One million four hundred thousand dollars of bonds were issued in 1910. The city has already paid back \$1,700,000 out of its earnings. Although two rate reductions have been made, the earnings have increased from over \$700,000 in 1911 to over \$900,000 in 1913. In those two years, after paying operation, maintenance, interest and depreciation charges and establishing a sinking fund, there was a surplus of \$434,000.

per year. Seattle's great white ways extend over twenty-five miles of street. The wiring is all underground. The city lighting system lights, in addition to this, 829 miles of street.

In 1913 the rates averaged less than six cents per kilowatt hour for residence lighting, less than three cents for business lighting, and one and one-half cents for power. There were numerous instances of large consumers enjoying lower rates. The private lighting plant was charging twenty cents per kilowatt hour before the municipal plant was projected. When the construction of the latter began the private rate went down to twelve cents. The price has gone down steadily since the municipal plant began operation, the private plant following in the wake of the municipal plant, so that although the municipal plant cannot serve the entire city, it determines the rates for the city. Seattle has the advantage of water power and of coöperation with the water system of the city, but it has long transmission of electricity both to the city and about the city.

The lighting department has been experimenting in the heating of two kinds of houses — concrete and frame — and keeping an accurate record of all the details of the experiment, but is not yet able to make domestic heating economical. It has, however, developed an immense patronage for electric cooking, making a rate of three cents per kilowatt hour. The average monthly rate of householders for electricity for cooking for two years was about \$3.

Seattle presents a striking illustration of the success of municipal ownership and the helplessness of citizens under private ownership.

ORNAMENTAL LIGHTING

Next to the volume of illumination — marked by tungsten arc lights, incandescent gas lights and the great multiplication in the number of both — the greatest improvement in public lighting has been in ornamental standards. When electricity was first introduced, electric lights were frequently suspended from unsightly wooden poles at street intersections or projected from wooden poles interspersed among the similar trolley and telephone poles, or put upon huge towers, until the street was made hideous in the daytime that it might be illuminated at night. Los Angeles set the pace for other American cities by

the establishment of what are now popularly known as "great white ways." The merchants of Los Angeles collected funds for the erection of cast-iron ornamental posts on three of the central business streets. One hundred and thirty-five such posts were erected, the city undertaking to provide the additional electricity for cluster lights. Globes containing incandescent lights were substituted for arc lights. This form of lighting, as well as the method of inaugurating the system, has prevailed all over the country. In Los Angeles to-day, as in most progressive cities, the lighting standards are erected by district assessment.¹

It is now unusual to find a city without at least one such illuminated business street.

Some cities, like Seattle and Chicago, are lighting all of their streets on this principle, except that in the outlying residential sections one globe is used instead of a cluster. The best lighted streets are still those provided with incandescent globes and with underground service. Michigan Boulevard in Chicago for a mile, the length of Grant Park, where the lighting is under the control of the South Park Commissioners, is the most beautifully lighted thoroughfare in America. Six globes on arms projecting at right angles from a gracefully designed and well proportioned bronze standard are far and away more artistic than any other standards thus far erected in American cities. Denver has put its downtown lights on trolley poles, thus reducing the number of standards, though not making them so beautiful as some other cities. Citizens must feel a sense of humiliation if their business streets are encumbered with any other poles than those that sustain the lights and the trolley wires. Manhattan and Washington dispense with the latter. New York's chief streets are not only well lighted, but its illuminated street signs establish a valuable precedent.

Public services are still largely limited to functions connected with the city street. The passing of superstition removes the barriers to the open road.

¹ Appendix 2, Statistics of display lighting.



CEDAR FALLS.

Seattle's municipal power plant is one mile below the falls.



FIRST AVENUE, NORTH FROM YESLER WAY, SEATTLE, WASHINGTON.
Seattle Municipal Light and Power Plant.



CHAPTER V

THE CITY'S WASTES

STREET CLEANING

STREET cleaning is conditioned absolutely upon street paving. The immense improvement in the paving of American streets has led to an extension of street-cleaning methods originally well-nigh monopolized by New York City. In 1909 about 100,000,000 square yards of highways were regularly swept by hand in American cities. The amount swept by machine was rapidly approaching these figures, while one-third of that area was flushed. The improvement in mechanical appliances is largely responsible for the greater cleanliness of streets to-day. Horse-drawn sweepers and sprinklers are being superseded by motor vehicles, high-pressure flushing machines, and the use of oil instead of water. Machines sending such a volume of water across the street as to wash nearly all the refuse into the gutter will necessarily supplant the very ineffective street sprinkler that still survives in many cities.

Street flushing is like a shower bath. It is intended to follow the cleansing process.

On smooth pavements it is possible also to use the squeegee, so long employed in European cities and familiar in private housekeeping in America. Where the paving permits the use of the squeegee — a flat rubber surface — it is possible to clean nearly twice as great an area in a given time with half the amount of water used by a flushing machine. Municipalities are experimenting with suction vehicles, operating after the fashion of a vacuum cleaner, to clean smooth pavements in dry weather. So much dirt accumulates in the city street, however, that it cannot really be kept clean unless there is work done by hand during the day and ample flushing at night. Receptacles for street rubbish are quite general. Denver has been a leader

in securing the coöperation of its citizens. It now uses receptacles painted with aluminum paint, containing bags. The receptacles can only be unlocked by the street cleaner, who takes out the full bag, substituting an empty one, thus keeping the street free from refuse.

The term municipal housekeeping is becoming clear.

The superiority of the motor vehicle to a horse is shown in Cleveland, where an electric street flusher cleans a mile of street for seventy-five cents as compared with \$4.50 for a horse-drawn wagon. Many cities depend now upon the flushing done by the street railway companies. Sprinkling cars are used extensively in the industrial towns about Boston. East St. Louis has been bribed by the Suburban Railway Company to permit it to sprinkle the streets in lieu of putting its wires underground.

One does not try to put out a conflagration with a watering can.

The use of oil instead of water on macadam and similar paving has become quite general in New England and California and is found at least experimentally all across the country. Pawtucket, Rhode Island, has shown that the cost of oiling streets is \$1.25 a square yard as compared with \$1.40 which was paid for watering them. This economy has been effected in the face of the expense of oil by substituting a motor truck for nineteen watering carts, nineteen pairs of horses and nineteen drivers.

“Dust thou art, to dust returnest” was not spoken of the sanitary street.

NEW YORK BEFORE SCRUBBING

In the old Tammany days many of the streets in New York were never cleaned, and it was held that some of them could not be cleaned. The practice was common in many of the streets of the East Side to allow wagons to be stored. It was said that there being no alleys and the district being compactly built, there was no other place to put the wagons. During the winter the snow would accumulate about these places; along the line of the street railways it would be swept in heaps under and over the wagons, remaining so indefinitely. It was contended that some of the asphalt streets were covered with a

thick, sticky substance which could not be removed. It was claimed that the chief constituent of this coating was axle grease, and that there were no known methods, at least within the reach of the annual appropriation, by which the paving of these streets could again be made visible.

A boy with dirty hands could not have been more fertile in excuses than Tammany was.

It was popularly surmised, though not fully confirmed until the advent of a reform administration, that the mismanagement of New York's streets was due to Tammany's necessity of providing places for a large number of retainers. It was generally supposed, however, that this was the unavoidable condition of affairs in American cities, and the mass of the population expressed very little hope of change, as well as very little desire for it. Under the administration of Mayor Strong, however, there was chosen as head of the street-cleaning department a man with large experience as a military officer of the United States, with an extended knowledge of sanitary questions and great ability as an executive. In spite of his being known to possess these unusual qualifications, Colonel Waring astonished the people of New York and of the country by the revolution he wrought in the street-cleaning methods of the metropolis.

Americans for the first time saw streets cleaned without going abroad.

NEW YORK AFTER SCRUBBING

Colonel Waring found the Tammany employees despised by the public, having little respect for themselves and none for their work. Their positions were uncertain, as it was constantly necessary to make places for new men who needed reward. These men, without uniforms, without organization, one might almost say without obligation, succeeded in 1888, in cleaning 53 of the 342 miles of paved streets in the city district. Under Colonel Waring 433 miles of streets were cleaned from once to five times a day by an army of 2500 men, organized after military methods, taking as much interest in their work and as greatly respected by the public for it as are the members of the fire department.

Colonel Waring and Colonel Goethals have shown the superiority of military to business methods.

One of Colonel Waring's simplest devices to secure efficiency was happily spectacular enough to attract the attention of the country. He put his men into white uniforms. Although he kept in service most of the men whom he found left there by Tammany, he so altered their appearance that the bent and ragged crossing sweeper of the old days would not be recognized in the man in neat white duck suit, with military carriage. These uniforms had the effect of giving the men self-respect, of attracting the attention of the public and of making inspection easy.

These were the "white wings" that never grew weary.

Not the least important feature of this new system was the organization into districts, with inspectors and supervisors, under military discipline. There was an important democratic modification. A conference was held once a month between Colonel Waring's personal staff and the men, represented by one delegate from each section and one from each stable.

Colonel Waring organized Junior Leagues of school children to assist in keeping the city clean. These have been revived by Commissioner Fetherston, so that in 1914 there were three hundred Leagues with a membership of 300,000 children in the grades as well as the high schools. The children design their own posters to assist in the work of impressing the citizens with the possibility of a clean city.

Cleveland organizes the school children under junior street commissioners.

WASTE COLLECTION

The handling of a city's wastes involves two chief functions: collection and disposal. Shall the collection be by contract or day labor? The disposition by contract almost necessarily leads to the performance of the most remunerative service well and the neglect of the others.

There is an ascending scale of scientific service in waste collection. St. Louis, Newark, Philadelphia, Pittsburgh and Cincinnati allow contractors to make collections and operate the disposal works. The obligations of both city and householder are thus reduced to a minimum, while their sense of public responsibility coincidentally deteriorates.

Housekeeping is being municipalized, but housekeepers are not yet socialized.

The collection of waste involves also the question of its separation by householders and industrial organizations, so that there may be separate disposition. In some cities the authorities remove the garbage, but require the householder to dispose of his ashes and rubbish.

Springfield, Massachusetts, and Syracuse are examples of cities where the city collectors are expected to go into the basements for the refuse cans and return them when emptied. In Milwaukee the collections are made at night. If the cans are permitted to appear on the street to await collection, it is imperative that they be uniform and durable both for æsthetic and sanitary reasons. The householder, however, cannot be blamed for neglect if the service is not prompt. Neither can the municipal authorities do their work properly without the coöperation of intelligent and public-spirited householders.

Citizens, as well as officials, are public servants.

The only entirely satisfactory method is to have all the services performed by the employees of the municipality, from gathering the refuse out of the houses themselves to the final disposition by the most scientific methods. The placing of receptacles on the street or in alleys by the householder puts too much dependence upon his variable methods and ignorance.

Philadelphia is badly handicapped with the contract method of street cleaning, but a vigorous publicity campaign is being carried on by the Bureau of Highways and Street Cleaning. Civic and business men's associations have been appealed to for coöperation. Nearly 1500 receptacles for waste paper were placed in appropriate locations throughout the city in 1913. Literature has been circulated to persuade people to use the public receptacles and to provide themselves with better ones for household service. A woman inspector has been appointed to coöperate with the women's clubs. She gave two hundred lectures in 1913, influencing women and children through club, church, settlement and school meetings. Five thousand buttons have been distributed to children as symbols of their civic responsibility. The week of April 28-May 3 was set aside as clean-up week. The daily papers were used, pamphlets were distributed, and placards posted in store windows and public

conveyances. Thirty-four thousand cubic yards of rubbish were collected that week, equivalent in size to a solid block of dwellings.

Annual clean-up days are unnecessary in well-regulated cities. Whether removed by contract or day labor, there are four classes of waste: garbage, ashes, rubbish and street sweepings. Few cities gather and dispose of all of these wastes scientifically. Many cities organize one or other of these services well. New York, Washington, Pittsburgh and Boston provide for three separations of household waste — garbage, ashes and rubbish — and recover some value from each class of refuse treated separately. The collections are made by the municipality, but the disposal is done by contract. Cleveland and Columbus perform all the services, collecting the garbage and disposing of it by reduction, while the ashes and rubbish are used for filling. New York leads at present in the frequency of collection of garbage and ashes, the aim being to make a daily collection except in the remoter districts. Chicago, Washington and other cities attempt to maintain this maximum service in the business area and it shades off to a weekly collection determined by the distance from the center and the season of the year. It is not necessary that these methods should be uniform, but it is now possible with a reasonable expense for them to be scientific. Chicago is demonstrating the value of motor trucks, already using them in collecting refuse from central receiving stations and experimenting in the work of household collection. It is estimated that \$15,000 a year could be saved by this method of hauling.

Some day the city wastes may pay for themselves.

WASTE DISPOSAL

Street sweepings and garbage contain valuable organic matter which, if possible, should be returned to the land. A scientific and profitable method is to plow them into the ground and permit septic processes to make rich loam. This requires space and time. Ashes and other street rubbish may be dumped on land or in water, but there are sanitary objections to dumping refuse in water. Garbage ought never to be dumped on land for the same reason. Rubbish may be picked over and the

valuable materials used either for commercial or combustible purposes. This involves, however, a form of employment which is deleterious to the health of the workers. The feeding of garbage to swine is a popular method in small communities. For safety it requires close supervision and the very use of this method testifies to the undeveloped methods of the city government. The most extended scientific process for the disposal of garbage in the United States is reduction. Grease and fertilizer stock are thus secured. Cleveland has the largest municipal reduction plant in the United States. Fourteen cars are used to transport its garbage to the reduction plant. This plant has to be increased in size constantly to keep pace with the growth of the city, but the cost of disposal per ton is steadily decreasing.

The present scientific knowledge does not make a reduction plant a pleasant neighbor.

Another popular and successful method is incineration. In America, with our wasteful domestic methods, the garbage is so moist that it has to be mixed with ashes or other combustible waste to make incineration profitable. When scientifically done, there is a clinker or slag from the burning of refuse that makes a good filler for roads and other construction work. The heat developed in this process must be transformed into steam or electrical power or light in order to justify the expense. This method has the advantage over reduction of permitting location in the heart of the city, thus lowering the cost of cartage.

It is not reprehensible to make light of a city's waste.

Many cities have garbage crematories that serve adequately to dispose of the garbage, but give no return in heat, light or power. This wasteful method is being increasingly avoided, although in no instance is the plant combined with other public utilities so as to obtain the maximum service through economical administration. The incinerator in Milwaukee furnishes the light for McKinley Park and flushes the sewer tunnel. In summer it is sometimes necessary to add fuel in the form of cheap coke. This is only necessary when the proportion of garbage exceeds 80 per cent of the total refuse delivered. Up to this point the ashes and rubbish furnish sufficient fuel to evaporate the moisture from the garbage and still furnish light and power.

Extravagant housekeeping does not make economical municipal housekeeping.

Minneapolis began in 1908 to light and heat Hopewell Hospital and the workhouse buildings by its refuse. By 1912 the plant was running successfully enough to inaugurate the lighting of the streets. In two years' time the public lighting from this plant has been extended over thirty-one miles of streets. Arc lights furnished for \$60 have compelled the private company to cut its rate from \$70 to \$62.50. The expense of running the crematory has been about \$29,000. Set off against this is a revenue of \$12,000, leaving a net expense of \$17,000 and the immense gain to the citizens that has come from lowering the cost of private lighting.¹

A small public plant may grow a "big stick."

BALTIMORE TO SEATTLE

Baltimore's experiment in refuse disposal furnishes an illuminating instance of mere business efficiency. A private company was given a contract in 1902 for the collection and disposition of ashes and garbage, as well as cleaning the markets. A reduction plant was erected in the southern part of the city. The contractors were paid \$147,000 a year. This price was raised year by year until in 1907 it amounted to nearly \$205,000. On January 1, 1908, the city acquired the company's outfit, including stables, harness, horses, carts, wharves, shops and machinery, to be operated by the street-cleaning department. The contract for the disposal of the refuse was made for ten years with a private company. Ashes and rubbish are now collected by the city drivers and hauled or towed on scows to lowlands on the outskirts of the city. Garbage and market refuse are collected and sent on scows to a reduction plant, for the disposition of which the contractors receive \$66,500 a year.

Baltimore disposes of its sewage by economical municipal methods, of its refuse by profit-making business methods.

¹ The municipalities are much more inclined to operate crematories than reduction plants. Forty-three of the forty-eight cities reporting incineration plants in 1909 owned them. Seventy-nine cities reported reduction plants, of which only two were municipally owned. The Chicago Waste Commission, reporting on twenty-five of the reduction plants of the country, indicated a market value for their product of 3½ million dollars.

Seattle has led the way in proving the value of the familiar German method of burying refuse for the redemption and fertilization of land. Dr. James E. Crichton, Commissioner of Health, began this disposition of Seattle's daily production of four hundred tons of refuse. The city's great area had compelled it to erect incinerators in different sections to save cartage. Dr. Crichton chose low-lying land upon which the refuse was dumped to a depth of about three feet. Over this was spread an antiseptic spray to prevent the breeding of flies and mosquitoes. The refuse was then covered with sand or clinker and ashes, permitting aeration. The combined action of the bacteria and oxygen disintegrated the garbage. The judicious scattering of boxes, cans, bottles, straw and paper helped to provide space for the circulation of air. What could not have occurred in a mass of compact garbage was thus expedited, and at the end of three months even tin cans had disintegrated. Grass seed was then sowed on this land and the desert began to blossom.

The small towns of Aberdeen and Hoquiam, Washington, have followed the method of Seattle.

The Pacific cities with characteristic audacity overlook the timid progress of the Atlantic Coast and choose their precedents from the superior methods of Europe.

NEW YORK WASTE DISPOSAL

New York's wastes for many years were carted to the waterfront, where these objectionable materials were placed upon barges and scattered by hand labor in the waters of the bay or on lowlands, with very noisome results in either case. Italian laborers "trimmed" the barges for perquisites, the padrones "trimmed" the laborers and Tammany "trimmed" the city. In 1888 the government established the office of Supervisor of the Harbor of New York, putting in charge an officer of the navy with a view to restricting the deposit of matter in the harbor.

The Federal Government spends \$30,000 a year redigging the post holes New York has filled up.

New York is continuing its experiments in waste disposal. In the three chief boroughs the Commissioner of Street Cleaning, appointed by the Mayor, controls not only the cleaning of

the streets, but the removal and disposition of ashes, garbage, rubbish, street sweepings, snow and ice. Only the disposal of dead animals and offal is left to the Department of Health. New York uses extensively hand sweeping for its streets, supplemented by street sweepers, flushing and squeegee machines. The heart of the city is cleaned at night. The department employs about 3000 men on the streets. In addition to the imperative work of street cleaning, the department estimates that it is burdened by the necessity of paying \$270,000 annually for the removal of street litter unnecessarily imposed upon it by careless citizens and by the failure of the city to provide receptacles.

The labors of city fathers are increased by dirty children.

The department uses a metal vehicle with a capacity of $1\frac{1}{2}$ cubic yards for the collection of garbage and a wooden wagon holding $7\frac{1}{2}$ cubic yards of rubbish. Eighteen hundred drivers are needed for the service, each driver collecting about five tons a day. The wastes are hauled to dumps. Garbage is towed to Barren Island in Jamaica Bay, where it is reduced to grease and fertilizer. About half of the ashes and rubbish collected in Manhattan and the Bronx is used in filling at Riker's Island, where sixty-five acres have been added by this process. The other half is used for filling by the boroughs. In Brooklyn the wastes are burned. A more economical contract was made in July, 1913, giving a contractor an arrangement whereby the city will receive nearly \$500,000 in five years for garbage delivered at the water front of the boroughs of Manhattan, Brooklyn and the Bronx.

As early as 1895 Colonel Waring had compelled the separation of garbage, wastes and rubbish. He built an incinerator in East Eighteenth Street that seems to have been operated so that it ran the machinery of the plant and nothing else. Commissioner Woodbury built another under the Williamsburg Bridge. Like the former plant, it had a conveyor for sorting the material and boilers for producing steam. It succeeded in lighting part of the bridge, but when the attempt was made to light the whole bridge, it burned itself out because the plant was too small. The use of the incinerator to dispose of rubbish was continued, but a private company offered to light the bridge more cheaply than it could be done by a small plant. Com-

missioner Woodbury did not surrender his belief that rubbish can compete with coal, but found it necessary to have so large a plant that the cost of hauling the rubbish became prohibitive.

With a municipal transportation system New York could make its wastes economies.

A more successful use of the city's wastes is in process in the Borough of Richmond. For several years garbage has been burned — more precisely, has been burning itself — and furnishing enough heat to run the machinery of the plant and light it. The clinker that drops from the furnaces has been used as a foundation for concrete sidewalks. A later improvement mixes it with cement, and superior bricks are made. A large revenue might be secured in this way but for the legal limitations preventing the Borough from going into the market with its products. This same limitation imposes additional burdens on the plant because the Borough cannot sell the scrap iron that is extracted from the refuse by a magnetic separator. Meanwhile, the Borough is using its products in its own buildings and driveways.

Municipal mismanagement is not inspiring, but it is sometimes inspired.

SNOW REMOVAL

New York's narrow, congested downtown streets make of a snowstorm sometimes a million dollar luxury. New York has recently improved its methods of disposing of snow with economy. New York is showing how a city which is adequately equipped with storm water drains may use them for the disposal of snow. In 1914 John T. Fetherston, Commissioner of Street Cleaning, removed five million yards of snow in one month. The previous season record was two and one half million. It has been proved by tests that under proper supervision, a powerful stream of water from a hose will wash snow into the storm sewers without causing the water to back up into cellars. The work is achieved by organizing the forces so as to dispose of the snow as it falls. The method is to double the sweeping and street-cleaning force of the department, giving each sweeper a helper to clean crosswalks, to open gutters and to keep the space around sewer basins and fire hydrants clear. Snow can be removed in this way at about one-fifth the cost necessary to cart

it to the river front. It is estimated that for the 570 miles of street now cared for a force of 20,000 to 40,000 men can remove an eight-inch snowfall in eight hours.

The surplus labor of the city makes it easier to remove snow as it falls than it is for the farmer to make hay while the sun shines.

The removal of snow in Boston is divided into urban and suburban districts. The Public Works employees plow out the gutters, clean the crosswalks, and if the snow is deep enough, level off the street with a breaker drawn by six horses. In the business area about one hundred miles of streets are cleared with considerable difficulty. The streets are so narrow that traffic is suspended until the snow is removed. Boston's abundant water front simplifies the problem and gives it direction. An ordinary storm — up to six or eight inches — is handled by the accustomed force and equipment — 1000 men and 300 carts. The city is divided into six snow districts, and contracts are awarded by the cubic yard for the removal of snow. The street railway company assists in disposing of snow by running gondola cars at night to the bridges, where the snow is unloaded into the water. This is the most efficient and economical method yet used. To a limited extent, snow is dumped into the larger sewers.

Snow, like other urban luxuries, is a joy chiefly to the immature and the unemployed.

SMOKE ABATEMENT

Innumerable fiascos have been followed by notable progress in smoke abatement in the last decade. It is impossible to estimate the exact losses from the waste of fuel or the destruction of values due to soot. The calculations that are made conservatively, however, completely dispose of the ancient superstition that smoke is excusable as an evidence of prosperity. It has been estimated that the annual per capita loss from smoke in Chicago is \$8, in Cleveland \$12 (\$44 per family), in Pittsburgh \$20. Whether the actual loss is, however, half as large or twice as large, it is inexcusable, since scientific devices make smoke abatement entirely feasible.

Convincing experiments have been made by reliable scientists

in the United States Bureau of Mines and at the Universities of Illinois and Pittsburgh.¹

Mr. S. B. Flagg of the Bureau of Mines says that smoke prevention does not necessarily mean the use of a smoke consumer. Smoke prevention involves the removal of cool surfaces, such as the water-cooled surfaces of a boiler, further from the fuel bed, or changing the method of feeding the fuel into the furnace, or a better mixture of the combustible gases with incoming air. A catalogue of the losses due to needless smoke is an impressive indictment of this form of waste. There is the periodical decoration of the exterior and interior of buildings, the constant cleaning of interior furnishings, depreciation due to the increased wear, window cleaning, injuries to goods in stores and factories, increased cost for artificial illumination and the inferior output due to lack of light, laundry and cleaning bills, the loss on books and works of art, the burdens laid upon hospitals and the effect on the health of people, animals and plants.

The loss from carbon going up is estimated to be only one-tenth the loss from carbon coming down.

The movement for smoke abatement has now extended to cities of all classes. A dozen of the smaller cities already have an ordinance or a smoke inspection officer. Of the cities from 50,000 to 200,000 population, more than one-fourth make some effort to stop this nuisance. Most of the cities of over 200,000 population have grappled with the problem. As is common in the case of a new reform, many of the ordinances are limited by exceptions designed to protect property at the expense of the people. Denver, Detroit and St. Louis are very gentle with offenders. Buffalo has an ordinance so drastic that it promises to follow the fate of most American legislation that is not enforced. Philadelphia, Providence, Rochester and Louisville stultify themselves by exempting locomotives.

A physician who smokes seldom counsels against smoking.

The most conspicuous success is being made by the smoke inspection department of Chicago with the assistance of a public-

¹ The Mellon Institute of Industrial Research and School of Specific Industries of the University of Pittsburgh is issuing a series of brochures reporting the results of its smoke investigations. The first nine numbers cover 773 pages. The subject is being studied exhaustively; one of the bulletins is a bibliography of 160 pages.

spirited committee of citizens who are spending a considerable sum in educating the public and officials. While Chicago was estimated to be losing \$57,000,000 through smoke in the three years before 1911, it was spending \$143,000 for smoke abatement. Comparatively modest results would have justified this expenditure, yet it is believed that the smoke was reduced one-third in Chicago in that time. Excluding private houses, it is claimed that there are 17,000 smokestacks in Chicago emitting unnecessary smoke. To supervise these there were employed in 1910 fourteen assistants and nine deputies. Chicago provides a policeman for every 440 persons, but the most efficient smoke department in the country still provides only one inspector for 750 smokestacks.

It is not likely that there are so many offenders among the cosmopolitan citizens of Chicago as among the smokestacks.

It is estimated that 43 per cent of the smoke comes from locomotives, about the same amount from miscellaneous power plants and special furnaces, 6 per cent from the business district, 4 per cent from boats, and less than 5 per cent from domestic buildings. It is therefore evident that the electrification of railways and the construction of central power and heating plants would nearly clear the atmosphere, because the most expensive mechanical devices can be profitably employed by these enterprises.

The mechanical difficulties are solved: only intelligence and public spirit are needed to clear the skies. The city's wastes prove to be chiefly the citizen's waste.

CHAPTER VI

WATER AND SEWERAGE

THE CONSERVATION OF WATER

THE waste of water in American cities is one reason for the toleration of an inferior water supply. Cities cannot afford to filter water for extravagant use. One hundred gallons per capita per day is an abundant supply for all domestic and commercial uses when properly conserved. Pittsburgh, Philadelphia and Chicago furnish over 200 gallons per capita per day, Buffalo and Salt Lake City over 300. Some of this water may be wasted on account of faulty construction of the plant or bad administration, but much of it is due to lack of meters. The extravagance of Buffalo, for example, is easily traced to the fact that only 2 per cent of the water is reported to be metered. In Milwaukee, where the consumption is said to be 81 gallons, 80 per cent of the service is metered.¹ The consumption in Boston has been reduced in five years from 165 to 107 gallons by conservation methods. With two-thirds of the city metered, Meadville, Pennsylvania, uses 50 per cent less water than under the old system.

The expense of water for fire protection, streets and lawns may often be met by a dual system, filtering and metering only the domestic supply.

One of the obvious ways to reduce the expense of water would be to charge up all that is used by public departments so that there would be a check on waste. In 1912 Cleveland enjoyed a net profit of over half a million from its waterworks, although it furnished water free to the fire department, public and

¹ In many Massachusetts and Rhode Island cities where the consumption does not rise above 70 gallons, most of the service is metered, in Ware, Wellesley and Reading reaching 100 per cent. New Bedford, Cambridge and Haverhill by contrast have a consumption running up toward 100 gallons, while less than 20 per cent of the service is metered.

parochial schools, hospitals, orphanages, infirmary, cemeteries, parks, playgrounds, and for all public work in and under the streets. In Knoxville, Tennessee, one-fourth of the water used is not charged up on the books, and yet the plant is successfully operated from the engineer's point of view. It was proposed by the Council Water Works Committee of Minneapolis that all city departments should pay for water consumed in 1915. The annual revenue was half a million dollars, the net profit \$227,119, and more than that amount was given away.

Hudson, New York, manages its water supply so that all water is furnished free, the costs being added to the general tax rate.

LOS ANGELES WATER SUPPLY

The task of providing water for a city that trebles in population in a decade is certainly not a light one. When the city is located in a semi-arid region the difficulty is not lessened. Los Angeles having enjoyed the second largest increase in population in the United States between 1900 and 1910 has fearlessly penetrated the Sierra Nevada mountains to meet its need for water. The source of this supply is 250 miles north of the city. The water is brought by gravity through steel and concrete pipes and conduits, tunneling through the mountains for five miles and crossing the Mojave Desert for 150 miles. In addition to providing the city with pure water, the enterprise will reclaim more than 200 square miles of land near the city and develop 120,000 horse power of electrical energy.

Sir Isaac Newton has been a long time coming into his own. The best business methods were employed in securing the necessary land for the project, the options being acquired before it was known that the city was the buyer. At a cost of less than \$16 an acre 100,000 acres were purchased. Except in the first experimental stage, the whole gigantic project has been carried on by day labor under the direction of the city's engineers. It was estimated that the cost of construction would be \$23,000,000, and the work has been done within the estimate. By a wise provision labor was rewarded by bonus payments amounting to 30 per cent more than the regular day wage. Thus the work was made not only more efficient and more expeditious, but 10 per cent cheaper and the profits on the enter-

prise began to come in earlier. One of the incentives to exclusive municipal operation came through an experience with cement companies. The necessary ingredients existed within range of the aqueduct, and the city purposed providing its own cement. Before mills costing nearly \$1,000,000 could be completed, 100,000 barrels of cement were needed. The bids from half a dozen companies were identical — \$2.25 per barrel. The city knowing the legitimate cost, threatened to stop the excavation of the aqueduct until the municipal mills were running. Before nine o'clock the next day the bids dropped to \$1.50 per barrel. Los Angeles used enough cement on this aqueduct to build a wall 10 feet thick and 40 feet high around Manhattan Island.

Miles Standish is still a safe guide in war if not in love.

The water from the Owens River aqueduct empties into the Los Angeles River, from which the former supply was drawn. A daily supplementary supply approaching 300,000,000 gallons has been added, so that Los Angeles may treble in population for two decades more without exhausting it. Until such an increase in population takes place the water will suffice for the irrigation of 135,000 acres of land. This will provide for a "back country" in which there may grow the population indispensable to the continuance of any metropolitan city. With the intensive cultivation of this section two or three acres will sustain a family. The fall of water in the aqueduct is such that the larger part of the 120,000 horse power can be produced within 47 miles of the city, below the cost of any possible private competition. Three and one-half million dollars of bonds were issued in 1911 for a power plant.

Los Angeles may be free from smoke as well as from typhoid.

NEW YORK CITY WATER SUPPLY

It is not easy to supply the average growing city with water, especially in a populous country where long distance supplies are made difficult by the demands of intermediate communities. When the largest city in the country increases in population more than one-third in a decade, it taxes the ingenuity of the ablest engineers to supplement an exhausted water supply. Before the construction of the Catskill system the different

boroughs of New York got their supplies from different sources. The old Croton aqueduct dates back to 1842. It has been enlarged more than once, but the supply of Manhattan and the Bronx received small contributions from two other little watersheds with a capacity of about five per cent of that of the Croton system. The old Croton aqueduct is 34 miles long with a capacity of 90 million gallons daily. The new Croton aqueduct is 31 miles long with a daily capacity of 300 million gallons. There are about 1334 miles of mains that give the three million people of these two boroughs over 100 gallons a day each.

The other boroughs are dependent upon wells. Brooklyn is also served by three private companies that furnish a small amount of water. With less than half the volume of water that Manhattan and the Bronx enjoy, there are 1000 miles of mains supplying fewer than 1,800,000 people with 78 gallons each daily. The boroughs of Queens and Richmond are also supplied by wells, but they are able to furnish their inhabitants with over 100 gallons each per day.

Some parts of Greater New York have been fifty years behind other parts.

The new Catskill supply has its source 100 miles up the Hudson, where 1000 square miles of watershed will eventually furnish twice the present supply of Greater New York. Fifty miles of aqueduct is cut through solid rock, 55 miles is "cut-and-cover" tunneling, and 10 miles is of steel-pipe construction. A siphon tunnel carries the water 1100 feet under the Hudson River. A similar tunnel carries the supply under East River to Brooklyn and then under the harbor to Staten Island. There will be ready for immediate use upon the completion of the aqueduct 500 million gallons — nearly as much as the present supply of all the boroughs. The cost of this titanic system will be \$180,000,000. With the probable growth of New York the present watersheds ought to suffice for a century. Twenty-five thousand men have been employed. Seven villages and 32 cemeteries had to be removed. Eleven miles of railroad and forty miles of highway had to be relocated. The great reservoir, the Ashokan, has a capacity that would submerge the whole of Manhattan Island to a depth of twenty-eight feet. When full, the surface of the water in the reservoir will stand 590 feet above tide water.

The engineering and financial task of furnishing New York with water is half as big as the building of a canal to connect two oceans.

BOSTON WATER SUPPLY

The Massachusetts State Board of Health, under acts of 1893, investigated the water supply of Boston and its suburbs within a radius of ten miles. The Metropolitan Water Commission, which was subsequently established, comprehended twenty-eight cities and towns, having a population, in 1890, of 848,012. One-quarter of the population of the region was left out, including such large places as Cambridge and Brookline, which were content with their water supplies. They were given the privilege of entering later, as a number of the towns have done.

It was found that the most available source for increasing this supply was in the watershed of the Nashua River, while the Boston conduit to the Sudbury River was large enough fortunately to accommodate 50,000,000 gallons more. However, Boston is reaching the limit of its supply, and when it makes its next extension, it will have to go as far afield as New York has. Since the establishment of the Metropolitan Waterworks in 1895 there has been invested \$42,000,000. The Metropolitan District includes in an area of 175 square miles nine cities and ten towns that buy water from the Metropolitan system and distribute it to their populations, amounting to over a million people.

Boston protects the sources of its water supply, shielding even the banks of its reservoirs by landscape gardening and afforestation, so that filtration is unnecessary.

FILTRATION

The adequate disposal of sewage will remove the necessity for the filtration of water supplies. Until that day most inland cities will have to use filters. In 1870 no American city filtered its water supply. Sand filtration was experimentally begun the next decade and mechanical filtration in the following decade. By 1900, 6 per cent of the urban population enjoyed filtered water. In 1910, 28 per cent had a filtered water supply, two-thirds of the filtration being done by mechanical process.

Filtration must deal not only with turbidity but with pollution. Even the cities on the Great Lakes find it difficult to protect their water supplies against their own filth. Among great cities on inland streams Pittsburgh, Cincinnati, Louisville, and New Orleans have been conspicuously successful in their recently established filtration plants. A sediment is first gathered by coagulation in settling basins. The water is then filtered by gravity and afterwards mechanically under pressure, the filter medium being cleansed by reversing the purified water.

Pittsburgh draws its water supply from the Allegheny River, which is charged with the industrial and domestic wastes of an immense population. Six miles above the city on the north bank of the Allegheny River is a pumping station which raises the water to a receiving basin. A great deal of the sediment is here deposited, but the water flows into the sedimentation basin, from which it is filtered into the pure water reservoir. Before the construction of this plant the typhoid death rate in Pittsburgh was four times the American average. The effect of filtration in Pittsburgh was shown by the reduction of the death rate of 400,000 people in old Pittsburgh to 13 per 100,000, whereas for 130,000 people in the old city of Allegheny, while it still received unfiltered water, it was 47 per 100,000. This left the favored part of Pittsburgh with a death rate twice as large as that of the principal European cities, but only half of the American average.

Cincinnati has built a filtration plant eight miles above the city. The water is raised to two settling reservoirs for simple sedimentation. It then flows into the coagulation basins with nearly half of the suspended matter removed. Thirty to 40 per cent of the remaining substance is eliminated in the coagulation basins so that the water goes to the filter beds with a turbidity of only 10 to 50 parts per million. It is subsequently treated with chlorine gas.

Municipal water supplies now seldom compete with sanatoria that advertise mud baths.

Baltimore, St. Louis and Cleveland are completing mechanical filters larger than any others previously built in this country. Baltimore has thirty-two filter units, each with a capacity of four million gallons for twenty-four hours. It is only through the use of reënforced concrete that it has been

possible to build such large filters.¹ Philadelphia had an enormous typhoid death rate when it decided to filter the supply of its municipal water plant that has been the property of the city since its establishment in 1799. The biggest slow sand filtration plant in the world was completed in 1908 at a cost of \$25,000,000. In spite of the long delay in meeting this dangerous situation the plant was found to be inadequate because of the enormous consumption of water in Philadelphia. It has therefore spent more money in enlarging the filter plant instead of introducing meters to limit the waste of water.

Philadelphia preferred to strain at a camel than to swallow a gnat.

CHICAGO WATER SUPPLY

The intimate connection of water supply and drainage is best illustrated by Chicago, as it has, in the first instance, the easiest access to an unlimited supply of water of any metropolitan city of the world. Not only is there an inexhaustible reservoir at hand, but the city lies so low that difficulties of pumping are reduced to a minimum. The extent of the area of the city somewhat neutralizes this advantage. In spite of this supreme position, the inadequacy of Chicago's natural drainage and its unexpectedly rapid growth led to such an abuse in the pollution of its own water supply as to require as great an investment for the disposition of its sewage as other cities less advantageously situated must make for the provision of a water supply.

When the old individual wells became polluted by the growth of the city's wastes, a new enterprise was created, that of hauling water from the lake and selling it to the inhabitants.

In 1834 the village council appropriated \$95.50 for digging a public well. This supplied only a little colony on the north side, and the demand of the residents of the south side was so great that the individual water carts and owners were supplanted by a company. Pipes were extended into the lake for five hundred feet, and water was pumped into a tank with a capacity of five to six hundred barrels. This predecessor of the modern water system supplied so small a part of the population

¹ The Baltimore rate of filtration is 125 million gallons per acre per day, whereas in the sand filters of Albany, Philadelphia and Washington, the rate is two million five hundred thousand to six million gallons per acre per day.

that four-fifths of the people are said to have drawn their water for domestic use from the river or to have bought it from the water-cart purveyors.

The water wagon lost its popularity in Chicago a long time ago.

In 1854 the city opened its own waterworks. The water was taken from an inlet basin on the lake shore and pumped into a reservoir on each side of the city. In 1867, the first tunnel was completed, extending into the lake for a distance of two miles, giving the first adequate water supply. This had to be renewed after the fire of 1871, and since then has grown rapidly to the present enormous system, which included (1913) six intake "cribs" in the lake, at distances of from two to four miles from the shore, and fourteen pumping stations that pumped in one day (February 9, 1912) 670 million gallons.

The cost of this system serving a city with an area of 191 square miles was, in 1913, over fifty-six million dollars.

Each successive extension endeavored to reach out into the lake beyond the area polluted by the city's sewage, but from the beginning the sewers had been constructed to reach the nearest outlet, whether river or lake. Consequently there were numerous sources of pollution, and the fluctuation of the water, due chiefly to the wind, made it impossible to prevent the growing mass of sewage from reaching the cribs. Although the water was drawn from a point seventy or eighty feet below the surface of the lake, the supply was always polluted during storms and often at other times.

CHICAGO SEWERAGE

The first system of sewerage in Chicago was provided in 1855. Up to that time the city's only artificial device for drainage was in submerged wooden boxes on a few of the principal streets. These failed to carry away the surface water in time of rain and, as a result, the city experienced successive epidemics, the death rate becoming the highest in the country. For the six years between 1849 and 1854 the death rate was 48.92 per thousand, in 1854 reaching the enormous figure of 53.9. The construction of sewers was not only of direct advantage to Chicago but was indirectly valuable by necessitating

the raising of the city's datum. The original surveys for the sewerage system indicated that the surface of the ground in the vicinity of the river was only three or four feet above the surface of the lake. On the west it reached a level of ten or twelve feet at Ashland Avenue.

It was necessary to raise the grade of Chicago's streets in order to keep the sewers underground.

At that time Chicago had the good fortune to possess in the person of the city engineer, Mr. E. S. Chesbrough, an experienced and far-sighted public official. He saw that it would become necessary to create an outlet to the southwest, but, as that seemed impossible, he was sent by the sewerage commissioners to Europe in 1856 to investigate the sewerage methods there. Mr. Chesbrough's investigation of the chief cities of western Europe led to a reorganization of Chicago's sewerage system, which ultimately resulted in the drainage canal project, and was of great influence on the other cities of the country, no one of which at that time had any system worthy of the name.

With the continued increase of Chicago's population it became evident that the sewage must be diverted from the lake, and happily there was a natural course which it could follow. The idea of turning the waters of Lake Michigan into the Chicago River and thence through the Desplaines, Illinois and Mississippi rivers into the Gulf of Mexico is not so revolutionary as it seems at first sight. In the last glacial age the lake doubtless did drain in that direction, and in 1674 the great western pioneer, Joliet, said: "We can quite easily go to Florida in boats by very good navigation. There would be but one canal to make, by cutting only one-half a league of prairie, to pass from the lake of the Illinois into the St. Louis River."

Arrogant urban man is slow to learn of nature.

Had it not been for the lingering ideal of a ship canal from Lake Michigan to the Gulf of Mexico, there would have been some other disposition of Chicago's sewage. At the time when it was decided to construct the drainage canal, a proposition was made by a Chicago engineer, and supported by many prominent citizens, to dig a tunnel from Chicago to Joliet, which would have given Chicago a low-level drainage system that by the aid of gravity might have disposed of the sewage on farms with very much greater economy.

The dream of inland navigation, which will without doubt be realized, gave the sanction to the idea of a drainage canal.

The legislature created the sanitary district of Chicago, a special taxing body, with power to coördinate the drainage areas of Chicago, to turn the water of Lake Michigan into the canal which should be constructed, and to make connection with the Desplaines River. The pumping works at Bridgeport were enlarged, the Desplaines River was diverted for several miles, locks were constructed at Lockport, thirty-three miles from Chicago, and an aqueduct built at Joliet, thirty-seven miles from Chicago.

The first board of trustees of the Sanitary District of Chicago was elected in December, 1889. It has worked in coöperation with the city of Chicago and its suburbs. It has steadily enlarged its functions as the pollution of Lake Michigan continued over areas not included in the Sanitary District. Chicago has reversed its sewers, discharging them into the river instead of the lake. Since the city lies so low that sewage cannot be disposed of by gravity, pumping stations have been built by the city that are operated by the District. The original Sanitary District of Chicago contained 185 square miles. It has since been enlarged by the North Shore District of $78\frac{1}{2}$ square miles and the Calumet District of $95\frac{1}{2}$ square miles. The present Sanitary District has about the same area as Greater New York.

In spite of the expenditure of \$80,000,000 in an effort to protect the water supply of Chicago and neighboring communities, the pollution of the lake continues.

The Sanitary District is not allowed by the Federal Government to divert enough water from the lake to make a satisfactory current in the river and the Drainage Canal. The great industrial district of northwest Indiana bordering on Chicago continues to defile the waters of the lake. The multiplication of passenger vessels coming into the Chicago harbors makes an increasing source of pollution. After a quarter of a century of costly experience Chicago faces the necessity of filtering both its sewage and its water. Chicago is now drawing more than twice as much water from the lake as the Federal Government permits, and must more than double its expenditure to make the present system effective.

Chicago's dilemma presents the most powerful argument for state and federal prohibition of the pollution of inland waters.

SEWERAGE

A scientific system of sewerage must be expeditious, effective and economical. The sewage must be disposed of every twenty-four hours; it must be made inoffensive to the community and innocuous to other communities.

The following methods may be said to be open to modern communities: (1) The simple, primitive device, far from universal as yet, of having one or two outfalls below the city. (2) To prevent the pollution of streams by both organic matter and factory wastes, involving the separation of the sludge. (3) The distribution of sewage on broad areas for redeeming waste land. (4) Sewage farming for market gardening or raising cattle. (5) Incineration. Many American cities still dump the sewage by the shortest route into the nearest waterway. Cities are rapidly multiplying that protect at least themselves against the offensiveness of crude sewage in their own waterway. The consideration that is necessary to devise intercepting sewers and outfalls below the city often leads to sewage treatment. This is, of course, most natural where a city is protecting its own water supply.

Cities still foul their own nests.

Sewage sludge must be separated from the effluent not only because of its offensiveness, but its organic value. In addition to screening, sludge may be separated by sedimentation or septic tanks. Many small cities use septic tanks where the sludge is deposited long enough to be completely freed of putrescent matter. The greater volume of sewage in larger cities, especially with the extravagant American water supplies, increases the difficulty and expense. For economy's sake cities discharge the sludge into the sea, as in Boston. Even New York, as a result of minute investigation into the various alternatives, purposes to follow the method of London and carry its sludge out to sea. Another method is to deposit crude sewage on the land, successfully done in Pasadena and Framingham. This involves a large available area of waste land. Nuisance is avoided, as well as the menace of flies, by depositing the sludge dry on the land. At Worcester 18 million gallons of sewage is received daily at the chemical precipitation works. The sludge, which contains about 90 per cent moisture when it comes from

the tanks, is treated with lime — 55 pounds to each one thousand gallons of sludge. Moisture is reduced by pressure and the sludge cake is used to fill in low waste land.

The Massachusetts Experiment Station at Lawrence furnishes information on all methods of sewage disposal.

The new Baltimore system disposes of sludge to farmers. The sludge is first digested so that it gives but little offense and then it is dried upon under-drained sand beds. Baltimore has adopted the so-called Imhoff or Emscher tank that has been perfected in Germany. This latest improvement upon the sludge process turns out an inoffensive sludge with the greatest economy of time and space. It has been used successfully at the Pennypack Creek Sewage Treatment Works, built by Philadelphia to protect its water supply. The method is also employed at Atlanta. Where the sewage and garbage disposal plant can be united, it is possible to consume the sludge. The amount of moisture remaining in it, even after the best processes, makes this method expensive unless it can be combined with the disposal of the rest of the city's refuse.

A polluted stream is uncivilized.

NEW YORK SEWERAGE

The disposal of sewage in a world metropolis like New York is an overwhelming administrative problem, but one with which modern science is perfectly able to cope. New York is making Herculean endeavors to deal with the subject by big New York, rather than great scientific methods. Every 24 hours it is estimated there is poured into the Harlem River nearly 100 million gallons of sewage, into the North River 132 million, and into the East River twice as much. This process has been going on since New York was settled. It might be supposed that the rivers would be cleansed by tidal movements, but this sewage could not get by Sandy Hook and what is not destroyed by septic processes in the water, is washed back and forth by the tides. There is a constant deposit interfering with navigation and health. Every year the Department of Docks and Ferries dredges 40,000 cubic yards of deposit from the slips of the lower East River alone, to say nothing of the rest of the water front and the work of private enterprises.

Father Knickerbocker is a twentieth-century Sisyphus.

A sewerage commission has been organized which has drawn up a plan of sewage disposal. The Harlem River is to be protected by trunk sewers leading to a large settling basin at Ward's Island, whence the sludge will be taken out and burned or carried to sea. A similar system will protect the north shore of Long Island, carrying the sludge to an island in the Sound. Manhattan Island is to be served by small settling basins at the foot of cross streets where the solids will be incinerated. Brooklyn is to be relieved by great trunk sewers that will reach to Coney Island and thence to a settling basin to be built three miles from shore. From this basin the sludge will be taken in tank steamers and dumped 100 miles out at sea. This system already includes a huge sewer siphoning under the East River as the water supply is siphoned under the Hudson River. This trunk sewer running for 13 miles from Manhattan is costing nearly \$23,000,000.

All the abandoned farms of New England might be redeemed by the organic matter that will be wasted on Mother Carey's Chickens.

BOSTON SEWERAGE

The most effective protection of streams in the United States is doubtless found in the metropolitan sewerage system of Boston. The first legislation for the protection of Boston was introduced in 1709 and was designed to harmonize the differences between the individual owners of the various sewers and drains. In 1837 the office of superintendent of sewers was established and the beginning made of the construction of a more uniform system. As a result of the growing appreciation of Boston's abnormal death rate, which was 30.5 in 1872, the Boston sewerage commission was appointed in 1875. At that time cesspools were in general use. There were 125 miles of sewers emptying directly into the bay and it was not uncommon at high tide for the sewage to back up in the pipes.

Boston had as much trouble with the sea as Canute.

In 1877 the Moon Island site for discharge in Boston harbor was chosen and from that time to December 31, 1885, over \$5,000,000 were spent on the Boston sewerage system. In 1892 an act was adopted which endeavors to secure a just form of

taxation and a unified sewerage system. In 1897 the legislation was enacted which gave the city council of Boston the right to appropriate a sum not to exceed \$1,000,000 in any one year for the construction of sewerage works. The act also provides that the board of street commissioners, with the approval of the mayor, shall have authority to regulate all the natural waterways of the city.

The later acts only facilitate the coöperation of the authorities of Boston with the Metropolitan Sewerage Commissioners. This body provides for the drainage of twenty-five cities and towns in the metropolitan district, including the valleys of the Neponset, Charles, and Mystic rivers.¹ All of the Boston Metropolitan sewage empties at two points into the bay (except one million gallons a day that is treated at the Clinton Sewage Disposal Works). In this way, while the crude sewage is discharged freely into the sea, the general system has the immense advantage of dealing with an area of 191 square miles and protecting from pollution all of the many streams within that area.

Boston casts more than bread upon the waters.

BALTIMORE AND NEW ORLEANS SEWERAGE

Baltimore and New Orleans enjoy the advantage that comes to cities that postpone their public enterprises until the best methods have been developed. Both cities have had a long dishonorable record with open sewers carrying the city's foulness down the gutters and into canals or streams with obvious insanitary conditions. Baltimore has had a long debate over the sewerage system because of the great expense involved in doing it by the most approved methods, and thereby protecting the oyster beds ten miles or more from the city in Chesapeake Bay.

It has finally been decided to build a system in accordance with the best scientific principles. The city has covered over Jones Falls, a vile stream, and incidentally secured land for the construction of a very much needed thoroughfare through the heart of the city, connecting its water and steam transportation systems. Having torn up streets and constructed sewers, the opportunity for repaving has been made and embraced. The

¹ Appendix 1. Statistics of Boston's sewerage system.

sewerage system covers an area of 32 square miles of hilly country, crossing two railroad tunnels and two streams, following steep grades, quite a little of it running below tidal level. It connects with every one of the 125,000 houses in the city. The sewage is to be purified before the effluent is discharged into the harbor.

The labors of Hercules in the Augean stables no longer seem miraculous.

To carry the natural drainage of Jones Falls and provide for the future drainage needs of the city three conduits, each twenty feet in width, built of concrete and paved with vitrified brick, have been constructed in the old bed of the stream. Connecting with these is a twenty-nine foot drainage tunnel under Guilford Avenue. Only one of the conduits will ordinarily be used, the other two being available for flood water. Over the conduits a roof made by earth filling has been constructed and the pavement above this constitutes a street. The Fallsway is costing \$1,000,000, and the entire sewerage system, 1100 miles in length, is costing \$20,000,000.

Baltimore has become a modern city in sanitation at the cost of a Super Dreadnaught.

New Orleans, lying below the level of the Mississippi River, has been dependent upon huge drainage canals connecting with gutters down which the foulness of the city flowed. The new intercepting sewer system puts all of these services underground. It sets free the drainage canals and they are being transformed into boulevards much after the manner of the metamorphosed fortifications of Paris. New Orleans has escaped from the eighteenth-century spirit that let a franchise for the construction of a sewerage system to the New Orleans Sewerage Company at the end of the nineteenth century.

PASADENA'S SEWER FARM

The Pasadena sewer farm was established in 1887 when 300 acres of land were purchased at \$125 per acre. Subsequently the farm was increased in area more than 50 per cent. It was secured in the face of the protests of citizens ignorant of sanitary laws and suspicious that a nuisance would be introduced into the neighborhood. At the entrance to the farm is found a

settling tank by means of which the coarse materials are extracted before the filtration process begins. The sewage is discharged at the rate of a cubic foot a second about 7 A.M. and reaches its maximum of approximately $2\frac{1}{2}$ cubic feet at 11 A.M. This means a deposit of over a million gallons of sewage every twenty-four hours. In 1913 the farm was so divided that 65 acres were devoted to an orange orchard, 110 acres to an English walnut orchard, 142 acres to alfalfa, and the remainder to grain and hay.

There is a state horticultural station at the farm in which citrus, walnut, and other trees are raised experimentally and sold to the public. A part of this station is devoted to the growing of ornamental trees and shrubs used in the city parks and street parkings.

The topography of the farm is such that a mountain torrent cleans out a gravel and rock quarry, thus furnishing additional revenue. For the fiscal year ending June 30, 1912, the receipts were about \$20,000 from the sale of hogs, agricultural, and horticultural products, rock and gravel. The expense of operation was a little over \$5000, leaving a surplus of nearly \$15,000 to be devoted to the improvement of the farm and sewage disposal.

The sewage is turned into the walnut groves as soon as the leaves are off, about December 1, and kept there until the foliage comes on about April 1. The remainder of the year sewage is used in the open fields. The sewage is not run upon any area longer than a few days at a time, and then that area is allowed to become sufficiently dry to be plowed or cultivated. The sewage is thus always being absorbed into the ground and not left upon the surface. Under the guidance of an exceptionally intelligent superintendent it has proved so great a success that Pasadena has entered into a contract with South Pasadena and Alhambra, whereby the three cities shall establish a common sewage farm elsewhere and share the expense and benefits.

Pasadena will discontinue the use of its present sewage farm at the rate of one-third a year. Pasadena's farm is advantageously situated because of the climatic conditions, giving an exceptional amount of sunshine for dryness and cultivation.

It is cheaper to use sewage than to throw it away.

PUBLIC COMFORT STATIONS

Public lavatories or comfort stations that are so adequately provided in European cities have been found for many years in American parks. American municipalities until recently have been peculiarly deficient in the provision of these necessities. New York and Boston many years ago established inadequate comfort stations, but the general demand for these conveniences in American cities is very recent. As in so many other instances, American cities are now trying to redeem their previous neglect and public comfort stations were found in at least forty cities in 1914.¹ New York established the first in Astor Place, May, 1869. The most ample provisions are still made by New York and Boston, each having over a dozen outside of their public institutions and parks. Including railway, subway and elevated stations, New York claims 254 free conveniences. Some of the public comfort stations in American cities now compare favorably with the best abroad.²

The average public comfort station costs from \$5000 to \$15,000 for construction and about \$5000 annually for operation. Youngstown has included an infants' dressing room in its women's department and the whole station only cost \$2500.

Congress appropriated \$50,000 for the two public comfort stations in Washington. All the important stations in America were visited and the Washington stations are supposed to represent the last word in public comfort station architecture, rising to the latest requirements in light, heat and ventilation. Attendants in both the men's and women's departments conduct information bureaus. There is a public telephone and a city directory. Each woman's station has a rest room containing a sanitary reed couch. Bundles may be checked, shoes polished, and toilet articles are for sale, including individual combs and sanitary napkins at cost. The public conveniences are entirely free. The patronage runs up to 10,000 a day.

The public comfort stations in Atlantic City were built under the most difficult conditions on the ocean side of the Boardwalk. They are, however, impressive buildings of reënforced concrete, utilizing the entire width of the Boardwalk. Minne-

¹ A list of these cities will be found in Appendix 2.

² Appendix 3.

apolis has completed a public convenience station as a contribution to its civic entrance. It is part of a monumental building facing a dignified triangle made by the divergence of the chief business streets of Minneapolis. It is much more than a public comfort station, for it indicates how these conveniences can be organically incorporated into a public monument or institution of dignity, obliterating the ancient prudishness that compelled citizens to patronize hotels, theaters and saloons in lieu of adequate public service.¹

PUBLIC DRINKING FOUNTAINS

Another aid to sanitation and temperance is the drinking fountain. For many years, La Crosse, Wisconsin, has provided artesian water at the corners of its business streets because it had this pure supply in limited amount owing to the general dependence of the city on Mississippi River water. Since the beginning of the legislation against public drinking cups and the invention of the bubbling fountain, many cities have supplemented the occasional W. C. T. U. or Humane Society Fountain by more generous public provision. Lansing seems to have been the first city to introduce a general system of bubbling fountains. Rochester is inaugurating an economical system by attaching drinking fountains to its fire hydrants. Chicago leads in drinking fountains, they being found in the residential as well as in the business sections. Eighteen were installed in 1912, one hundred and sixteen in 1913 and four hundred more in 1914.

Chicago anticipates the prohibition wave.

PUBLIC LAUNDRIES

The facilities for cleanliness in American cities are largely accidental. The movement for public baths languished while the suspicion prevailed that everybody had access to a private

¹ The public's readiness to use facilities is found in New York, where with cold water 28 per cent of the public comfort station patrons washed their hands, with hot and cold water 82 per cent. Where there was common soap 16 per cent washed, with soap from a holder, 42 per cent. Where there were no towels 22 per cent washed, with common towels 60 per cent, with individual towels 90 per cent.

bath tub. Public baths had become quite general before the establishment of public laundries.¹ There were eleven public laundries reported in the Bureau of Labor Bulletin in 1904. This number seems to have grown to no more than sixteen in 1914, and five of these are in Baltimore. The first public laundry in the United States was opened by the Public Baths Association of Philadelphia in May, 1898. This original public laundry did not prove satisfactory because many women refused to wash in the tubs used by men. Separate wash houses were then established. These are open daily from 8 A.M. until 3 P.M. There are eight units for women and six for men. The women are charged five cents an hour. The men, who come chiefly for the purpose of washing their own clothes, pay ten cents for a bath and the washing facilities. The bath is taken while their clothes are in the steam dryer. In 1912 there were only 3000 men and 1400 women patrons.

The public laundry of Cincinnati is used to save the municipal laundry bills and only on certain days of the week is thrown open to the public. The best modern appliances are available at a charge of ten cents for every four hours' use.

Baltimore leads the country in public laundry provisions. These Baltimore laundries average seven washing units apiece, used by 22,500 people in 1913. The charge is three cents an hour. The receipts in 1913 were \$1500, which was insufficient to pay the salaries of the matrons, without regard to interest on the investment, upkeep or depreciation. The laundries, however, are in public bathhouses, so it is difficult to estimate the precise expense. At each laundry the city maintains a store where washing essentials may be purchased. The laundries are open from 8 in the morning to 8 in the evening for use by women only, except in one case where both sexes are admitted. In that instance the women are limited to Mondays and Tuesdays.

The appointments are very simple, so that they can be used by the inexpert. Drainage and ventilation are adequate. The matrons instruct the patrons regarding the use of the apparatus and give general supervision. In fifteen years there has been no difficulty from contagious diseases. It is estimated that not

¹ For public baths see pp. 307-311.

quite half of the women in the congested district who need the laundry patronize it as yet. One reason is the absence of a day nursery to care for the children of these women. About 7500 white women use the laundries at the three Walters Baths and at the Greenmount Avenue Baths.

The largest class of patrons consists of 8500 colored women, who come from the alleys and crowded tenements or from houses where they are domestic servants to the Argyle Avenue Bath House. The third class of laundry patrons are 5000 to 6000 men a year who wash their own clothing in one of the laundries. For six cents they can get a bath and wash their clothes. The success of the Baltimore laundries leaves no excuse for those cities that have not made similar provisions.

The jest about the great unwashed applies to municipalities more than to citizens. Municipal sanitation is a great civic cleanser.

CHAPTER VII

PUBLIC HEALTH

VITAL STATISTICS

HEALTH is undoubtedly the most pressing interest of the municipality. Although industrial conditions are responsible for many accidents and much ill health, the municipality has a power of control over sanitation that it has not over the economic status of its citizens. The death rate is steadily falling throughout the United States, more rapidly in urban than in rural centers. The progress is immensely encouraging until one measures it by the neglected possibilities. It is estimated by the Census Bureau that the national death rate for 1913 was about 14 per 1000 of the estimated population, a big decrease from the average death rate of a decade earlier, which was over 16. Had the same rate prevailed in 1913, there would have been 184,000 more deaths.

The conservation of life ought to be the greatest lure that citizens or health departments or municipal administrations could have.

The greatest reduction of the death rate in the decade has been enjoyed by the metropolis of the country and its suburbs. New York, Jersey City and Newark all reduced their death rate 20 per cent. Still the death rates of these cities ranged about 17, while no northwestern city had over 14 per 1000. The death rate of the Twin Cities for the five-year period 1906-10 was 11, that of Portland, Oregon, 10, Seattle less than 10. In the year 1913 the death rate of all these cities was still lower. The possibilities of sanitation in cosmopolitan New York City are indicated by the fact that its death rate is lower than that of Albany, Pittsburgh, Boston, Fall River, Lowell, or that of any city where there is a large negro population.¹ The death rate of Manhattan, the most congested spot on the globe,

¹ See Appendix 1 for explanation of New York's declining death rate.

was only five points higher than the death rate of Greater New York, and it was more than 1 in 1000 lower than the Borough of Richmond, which embraces all of rural Staten Island. The death rate of overgrown Chicago for that five-year period, 1906-10 (a much more accurate statement than any given year), was less than that of classic New Haven or Puritan Cambridge or William Penn's Philadelphia or Roger Williams' Providence.

It is within the power of municipal officials now to save and enrich thousands of lives annually by easily applied methods, with an economy that will cover the cost of preventive measures a hundred-fold.

Professor Irving Fisher calculates that there are always 3,000,000 people ill in the United States, representing a waste of a billion and a half dollars. Tuberculosis alone is responsible for the illness of half a million people. A preventable disease, like tuberculosis, costs the country \$350,000,000 a year, and malaria \$100,000,000. Yet malaria has been completely stamped out in the older portions of the country, and we have at our finger tips the means of suppressing typhoid. The reduction in the death rate from typhoid fever is one of the most encouraging advances noted in this country. The European standard of 10 or fewer per 100,000 is now reached by many American cities. In two 3-year periods New York, Chicago and Boston had rates lower than 9; Seattle, Cincinnati and Newark, New Jersey, ranged from 6½ to 8.

The worst thing about typhoid is that it is no respecter of persons.

An encouraging phenomenon in the warfare against typhoid is the immense improvement due to the protection of the water supply. It is estimated in Pittsburgh that the filtration of the water of the Allegheny River is annually saving 7000 typhoid cases (sordidly estimated at \$150 per case) and 500 lives (measured at \$5000 per life) — a total of three and one-half millions. The reason for making this commercial statement of life values is that such economy for two years covers the cost of installing the filter plant. The filtration of water in Philadelphia reduced the typhoid rate in less than a decade to one-fifth or one-sixth its former proportions.¹ Innumerable other cases could be

¹ Chicago's average typhoid rate for a period of ten years, beginning with 1903, was 16.5 per 100,000. The range was very wide, from 7.5 in 1912 to 31.8 in 1903.

quoted showing the progress made in coping with this known preventable disease. Yet there are said to be more cases of typhoid fever in the United States than of plague in India. In 1910 thirty-two principal European cities, with a population of 31,500,000, had an average typhoid fever rate of 6.5, while the fifty American cities of over 100,000 population, totaling 20,000,000, had a typhoid death rate of 25. This indicates that 36,000 cases of typhoid and 3600 deaths were preventable in those cities alone by the use of known methods.

The deliberate taking of life is homicide.

HOUSING

Municipal health begins with water supply and housing. Every community recognizes the former. No American city has undertaken municipal housing, following the precedents of Europe. The most drastic regulation of the housing problem has taken place in New York City, where a Tenement House Commission was appointed in 1894. As a result of its investigations a Tenement House Act was passed in 1901 that would have transformed New York if it had been possible to get rid of all the old tenements. As it is, a million and a half of people have been housed in new tenements built according to the public requirements. Over 300,000 apartments, costing three-quarters of a billion dollars, guarantee that these people shall have outside light and air in every room, sink and running water within the apartment, and a private water closet, while two-thirds of the people have a private bath. All of these tenements and many of the older ones are now provided with fire escapes. Every new tenement above six stories in height must be fireproof, while the smaller ones are required to have fireproof stairs.

In the face of opposition by speculative landlords, the most congested city in the world has adopted a new standard of living.

The death rate has been reduced from nearly nineteen in the thousand at the time of the adoption of the Tenement

because Chicago is not yet satisfactorily guarding its water and milk supplies. However, it has come down from 173 per 100,000 in 1891. Providence — a city of a quarter of a million people — has reduced its typhoid death rate from 42 in 1884 to an average between 10 and 12 in these latter years.

House Law to thirteen and a half in 1913. These figures mean that over 20,000 lives a year are saved that would have been lost under the old conditions. The result of these restrictions has been to compel the erection of tenements on a larger scale than formerly. The old houses, built on a lot 25 by 100 feet, necessarily unsanitary fire traps, have given way to houses with a 50-foot frontage, sometimes built in multiple sections occupying most of a city block. The original Tenement House Department, organized by Robert W. de Forest and Lawrence Veiller, employing a staff of 385 at an expense of \$400,000 a year, had grown to a staff of just double the size, spending more than twice as much in 1913.

These improvements have not all taken place in crowded Manhattan. Between 1909 and 1914 the number of dark rooms in Brooklyn were reduced from 192,573 to 8016. The number of windowless rooms were reduced from nearly 60,000 to half a thousand. The experience of New York has been made available for the other cities of the state. The legislation of 1913 protects all the second-class cities.

There is at last a genuine interest in housing in American cities. The National Housing Association reports one hundred and seventy-seven cities and towns taking up the problem of housing — a subject that was left to chance twenty years ago.

Prolonged agitation has led to a revision of the conditions in Washington. The City of Magnificent Distances has had such spacious blocks that its poorer population, especially the colored people, have been housed on alleys. Alleys were not provided in the city plan, so that many of them had become *cul-de-sacs*. The hygienic and moral conditions were incredible in the capital city of the country. Washington has always been handicapped by real estate speculation. The lack of local self-government and the remoteness of national legislators have made the capital city vulnerable to real estate and banking interests that have had the ready assistance of congressmen who have profited by shifting real estate values. It is therefore in the face of the business interests that a heroic bill has been passed, providing that

The use or occupation of any building or other structure erected or placed on or along any such alley as a dwelling or residence or place of abode by any person or persons is hereby declared injurious to life, to public

health, morals, safety and welfare of said District, and such use or occupation of any such building or structure on, from and after the 1st day of July, 1918, shall be unlawful.

Massachusetts cities are the only ones that have had a reasonable limit to skyscrapers, even Boston being entirely free from such monstrosities until a lamentable concession was made to the Federal Government permitting the erection of a Custom House tower. Massachusetts cities, however, have had their grave difficulties from small tenements. What is known as the three-decker is a three-story frame tenement, that has proved to be a popular and profitable investment, too small to incite the concern that New York tenements have, but large enough to make unprofitable the rental of single and double houses. The Tenement House Act of 1912 affects all the Massachusetts towns and is the broadest building law thus far passed in America.¹ Twenty-three communities have voted to accept the provisions of this act. The three-decker is virtually excluded, as such structures must be fireproof.

People are still housed by luck, but good housing is no longer merely good luck.

MUNICIPAL MARKETS

Municipal markets in American cities are an inheritance from the days before the great development of private grocers and butchers. Fewer than half of the American cities report public markets and only fourteen have an investment of over \$10,000.² Municipalities are said to spend twice as much on cemeteries and crematories as on markets. Some cities, like Baltimore, New York, Philadelphia and New Orleans, began very early. Boston has a historical market under Faneuil Hall, but it has not maintained the traditions of American freedom as well as the auditorium above. Three municipal markets were established in Baltimore by the state legislature before the incorporation of the city in 1796. Baltimore now owns the land and buildings of its one wholesale and ten retail markets. No one of these, however, is advantageously located with reference to transportation. None is on Baltimore's extensive

¹ Appendix 2.

² A list of cities having municipal markets appears in Appendix 3.

and useful water front. All goods must be hauled twice to reach the consumer. The markets are run at a loss, but are said to be responsible for the comparatively low cost of living in Baltimore.

The bucket may go too often to the well, but the basket does not go too often to the market.

Cleveland conducts five city markets. One of these is a farmers' market where there are 1000 stands and 500 more sell from wagons. Another is a fish market on a public dock where the consumer can deal directly with the fishermen. Retailers, as well as private consumers, have thus enjoyed a reduction of one-half or more in the price of fish.

The latest Cleveland market is an impressive, fireproof structure with an ornate tower. The building is 235 feet long and 136 feet wide, and makes provision for the sale of all kinds of market products. The unique feature of this market is a municipal cold storage plant where the consumer may keep his products and withdraw them at any time as he would the contents of a safety deposit vault. Before the public had learned to use the market, dealers had appreciated its value, storing 3000 barrels of apples, 2000 cases of eggs, 175,000 pounds of cheese, and other perishable goods during the first year. The public refrigerator is invaluable for the preservation of products during the three days of the week that the market is not open, saving their being carted about the dusty streets in unsanitary wagons or being kept in private refrigerators of doubtful cleanliness. The public is learning to buy goods in quantities with greater economy and to store them in their common refrigerator for use at other seasons. Seven rooms are now chilled, and a householder can store a crate of thirty dozen eggs or a barrel of apples for six months or more for forty cents, and 100 pounds of butter from June 1 to February 1 for fifteen cents. The deficit shown by the public refrigerator the first year was inevitable.

Cold storage has a new meaning when the consumer knows the combination of the time lock.

Indianapolis has for the better part of a century owned the public market, now housed in three brick buildings in the heart of the city. In spite of its popularity its methods were transformed by former Mayor Shank, who attracted national attention by showing how to serve the consumer direct through whole-

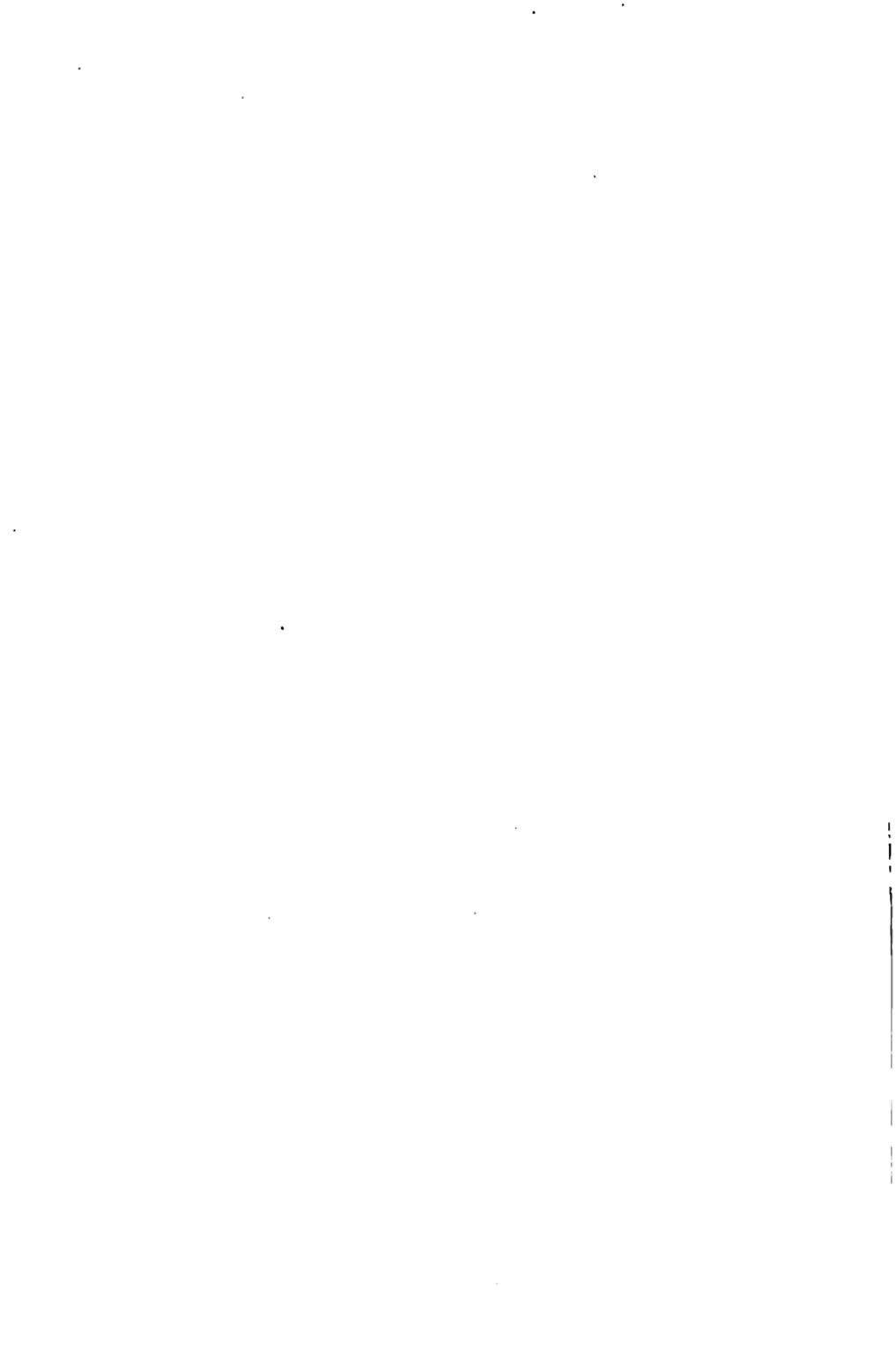


A. E. CHAPMAN, OFFICIAL FLY CATCHER.

Redlands, California.



CLEVELAND MUNICIPAL MARKET AND COLD STORAGE PLANT.



sale purchases. He sold potatoes to the consumer at lower rates than the commission dealers were paying for them, demonstrating the inadequacy of the present municipal market system. For a number of years the receipts of the Indianapolis market have been two or three times the expenditures.

The ultimate consumer has not yet delivered his ultimatum.

New Orleans has the best financial returns from its markets, but that is because it leases them. The receipts of nearly \$200,000 represent as good an income as most cities make for the consumer, but not the sanitary protection that such extensive municipal markets ought to guarantee the citizen. The city has a virtual monopoly of market rights. Its net profit of nearly \$80,000 a year may be an obstacle in the way of operating all of its markets, as it does four of them, in the interest of public health.

There is a better supervision of slaughter houses in America as sanitary knowledge becomes more widespread, but municipal abattoirs are only reported from Paris (Texas), Montgomery, Nashville, Dubuque, Los Angeles, and Grand Forks (North Dakota). The citizens of Grand Forks in 1913 voted \$12,000 for the erection of a model municipal slaughter house of brick and concrete.

The purchaser cannot have too intimate a knowledge of his food supply.

ROCHESTER MILK SUPPLY

Rochester, New York, leads the country in the supervision of its milk supply.¹

One hundred thousand quarts of milk from 8000 cows come daily to Rochester, some of it traveling as much as seventy miles. The first systematic attempt to improve the milk of Rochester was made in 1897, when the population was about 160,000. Milk inspection was extended out to the sources of supply, the sanitary inspectors in the city were multiplied, bacteriologic examinations were made of milk from the wagons, and summer milk stations were opened in charge of trained nurses. The bacterial counts and the names of the milkmen are pub-

¹ Fourteen of the 67 largest cities in the United States require milk to be delivered in bottles. Three cities—Denver, Newark, New Jersey, and Fort Wayne—provide that the milk must be kept below 50° Fahrenheit during transportation.

lished monthly. Rochester grades all milk — A, B, C. Grade C milk cannot be sold in the city. This has excluded twenty-nine milkmen. The milk inspector is not only a critic: he is a teacher trying to show the dairyman as well as the consumer the advantages of scientific methods. Eight hundred farms are inspected from two to five times annually by three inspectors. One result of this inspection is shown in the greatly decreased death rate of infants. In spite of the growth of the population, the number of deaths of children under five was reduced from nearly 10,000 in the period 1884-1897 to fewer than 7000 in the period 1897-1909.

"Where the white hearse goes most often there you will find the weakest place in your municipal housekeeping." (*Sherman C. Kingsley.*)

So successful has been the inspection of milk that Rochester has transformed its milk stations into child welfare stations. The first municipal milk station was opened in 1897. By 1899 the improvement had been great enough to warrant the cessation of pasteurizing milk because there was an abundance of clean milk. In 1905 some of the milk stations were put in the schoolhouses. In 1911 all of them were in public or parochial schools and called "Child Welfare Stations." In that year, the selling of milk was abandoned and the nurses gave all their time to the care of children and the teaching of mothers. Child welfare stations are open from 8 to 11 A.M. during July and August, after which hour the nurse visits the homes. The larger schools have a second nurse who visits all day. The work is done by school nurses because they are already acquainted with the children. The nurse gathers statistics, including social and medical facts about the family.

The services of the nurse are limited to her professional function, but she directs the people to other agencies for other needs. In a dirty home where the mother is sick the nurse supervises a cleaning woman until the mother is well enough to be held responsible for her household. When necessary the Health Bureau screens the windows as well as cleans the house. Each week demonstrations in the care and feeding of infants are carried on at every welfare station. The stations sell or loan on deposit nursing bottles and sell also nipples, babies' pillows and even refrigerators. At each of the thirteen child welfare

stations Little Mothers' classes are conducted. One hundred and fourteen such classes were held in 1914. The number would have been larger but for the instruction that had been given in the schools during the year.

Rochester has stopped furnishing milk for babes, but it gives meat to growing women.

INFANT WELFARE

"Little Mother Leagues" have been established in New York, Kansas City, Cleveland and Milwaukee to instruct the school girls as to the care of babies. In New York City 20,000 girls from 12 to 14 years of age were enrolled in 1912 in these leagues. They not only anticipate motherhood, but assist materially in the prevention of infant mortality. Nearly 500 of these organizations existed in 1912. Doctors and nurses lecture and demonstrate on such subjects as breast feeding, hygiene of the home (cleanliness, ventilation, etc.), hygiene of the infant (including bathing, dressing, value of fresh air, infant feeding, with methods of milk modification).

Motherhood is being taken seriously.

The enormous death rate of little children has at last become a matter of common knowledge. The tragedy of the slaughter of the innocents at Bethlehem is obscured by the steady destruction of infant life. The possibility of coping with this needless infanticide is shown by the reduction of the death rate of children under five in cities while it is rising in the country. Our unconcern is partly due to lack of vital statistics. Doctor George W. Goler, the very efficient health officer of Rochester, estimates after years of agitation that 5500 registrations means 6000 births.

A child without a birth certificate may be handicapped for life.

Most of the movements for the care of child life have been initiated by private charity, but gradually the public health or similar departments of cities are induced to coöperate. In Bridgeport, Connecticut, a private visiting nurses' association established a milk station that resulted in the organization of two stations by the city in 1912 with provision for public nurses. Nashville operates four municipal milk stations with a nursing force of four, who make baby-saving work their chief enterprise.

New York established fifty-two milk stations in 1911.

In order not to encourage bottle feeding by the establishment of milk stations, the cities where they are organized generally devote much attention to expectant mothers. Instructions are given at the dispensaries. Expectant mothers are referred to hospitals for confinement or furnished physician, nurse or sterile sheets, and the families are followed up after the registration of the baby. The nurses of Dayton in 1914 made 772 prenatal and 955 postnatal calls. Boston has ten nurses in the division of child hygiene doing prenatal and postnatal work. Physicians are required by the Massachusetts law to report births within forty-eight hours.¹

The maternal instinct is expensive for chicks; it is too extravagant for babes.

In Los Angeles the municipal nurses make home calls during the school vacation, reporting to the milk station where breast feeding is impossible. Kansas City employed six nurses and six medical school inspectors in 1913. A card is sent to the mother of each baby reported, letting her know that the health office is interested and thus securing the coöperation of the mother. This encourages registration and the most important means of protecting child life — nursing at the breast.

We inspect prospective citizens from Europe, Asia and Africa; why not those that come from Nowhere?

SCHOOL MEDICAL INSPECTION

Elmira seems to have been the first American city to take official interest in the welfare of its school children. Medical inspection was introduced into the public schools of Elmira in 1872. Boston inaugurated a system of medical inspection of school children in 1894 with a staff of fifty school physicians.

¹ The Grand Rapids Clinic for Infant Feeding held a Baby Week in April, 1915. Young fathers, as well as young mothers, worked diligently to raise the needed \$6500 by various spectacular methods. A hundred milk dealers coöperated. Twenty thousand poster stamps were sold to the school children in forty-one schools. Pictures and notices were given in the movies. Collections were taken in milk bottles at all public meetings, the collection at the prize fight being twice as large as that secured at the Young Men's Christian Association. The methods adopted were designed not only to raise money, but to secure the coöperation of all the citizens.

It was felt, as a result of the agitation, that Grand Rapids had found its fatherhood.

A series of epidemics among school children stirred Boston to this initiative. The following year Chicago introduced the system, and New York followed in 1897 with a corps of 134 medical inspectors. Philadelphia came in the next year.¹ In 1906 Massachusetts made medical inspection in the schools compulsory for all of its communities. More than 500 cities had departments of medical inspection in 1914.

Medical inspection coincides with the growth of community consciousness. "Ye are all members of one body."

The first efforts were to reduce the danger of contagion among pupils. In the beginning medical inspection was administered by boards of health, but experience has led to the transfer of authority to the board of education. A distinction may be made between the natural function of the board of health to protect the community against contagious diseases and the physical examinations for defects, diseases and abnormalities that involve a greater supervision than is usually expected of boards of health. The exclusion of children with contagious diseases is a minor fraction of the work of medical inspection. Such exclusions ranged, for instance, from 1 per cent in New York City to 8 per cent in Newark, New Jersey, in 1909-10, although 60 per cent of the school children suffer from some kind of defect.

The Russell Sage Foundation in 1908 contended that about half of the children have defective teeth, which increases the time for completing eight grades half a year. One child in seven has defective breathing, which means a similar loss of time in finishing the elementary schools. One child in four has hypertrophied tonsils that add more than half a year to the time needed by the child to complete his course. One child in eight has adenoids and they compel on the average an extra year of work. Still more time is needed by children with enlarged glands, and nearly half of the children have them. Eighty-five per cent of the defects revealed by physical examinations are those of teeth, throat, eyes and nose.

The department of public health and charities in Philadelphia has established a division of ophthalmology where poor children can be furnished with glasses free. If 2500 children save one

¹ See Appendix 4 for details of the work in Philadelphia and Rochester.

year of school life there will be an annual saving of over \$87,000, not counting the child's time and its increased efficiency.

Eleven American states have laws providing for the physical examination of school children. In spite of this showing of the importance of medical inspection, in only 214 of the 443 cities reporting medical inspection in 1911 is a complete physical examination conducted by the school physician. In New York 23 per cent of the cases reported are treated. Pasadena improves upon that with 32 per cent, and Summit, New Jersey, leads with 47 per cent. After all of this inspection has been done, few cities have systems of records that serve the community adequately. Chicago records eight annual physical examinations in its schools. Pasadena appends the testimony of the teacher to that of the physician, and Berkeley provides a place for the scholarship records.

The average child is given a new lease of life when put under the supervision of some one more scientific than his parents.

SCHOOL NURSES

The number of children excluded from the New York schools because of infectious or contagious diseases had risen so alarmingly in 1902 that Miss Lilian D. Wald was able to persuade the Board of Education to experiment with the school nurse. The largest cities are now providing nurses in connection with medical inspection. They are able to take care of minor afflictions without the aid of the medical inspector. Originally medical inspection meant the exclusion of many children from school and the carrying of contagion into the home. In 1908 postal cards to the parents resulted in 6 per cent of the children being treated. School nurses raised this to 84 per cent. The treatment of minor skin and eye troubles by nurses in New York City reduced the number of children excluded from school from 57,665 in 1903 to 3361 in 1911. In addition, thousands of minor cures have been effected. Boston has thirty-six nurses; Chicago has one hundred.

The school nurse in Philadelphia saves nearly five days in each contagious case. This means nine thousand dollars saved directly by the educational system.

Oakland, California, instituted health inspection in the schools

in 1909. There are no volunteers, so that every one gives full time to the service, which is conducted by a medical inspector and seven graduate nurses. The work is so organized that each nurse may, if possible, visit the same schools in successive years. Each school is visited fortnightly. Once a year each child receives a systematic examination and the results are recorded. If the parents do not respond to the notices sent them, the nurse visits the home. While the nurses have not the training of physicians, they make possible more intimate examinations than can be expected of medical experts. Of 17,000 pupils in 1911-12 some attention was needed by 70 per cent. Two-thirds of these were still in the schools the following year, half of whom had received beneficial treatment. Five hundred cases were merely influenced to better methods of living.

Minneapolis combines the work of medical inspection and physical education. Including nurses and inspectors, there is a staff of nearly sixty. The schools for stammerers, mentally retarded and deficient, the open air schools, the school gardens and the truant schools are under the general supervision of the Health Department.

DENTAL CLINICS

Medical inspection has led to emphasis on dental clinics, partly because health is so dependent on teeth and partly because of the expense of dentistry. The work has commonly been inaugurated by dental associations. They frequently continue to coöperate with the school authorities, but the tendency is to municipalize the service. Rochester, that claims to have established the first dental clinic in the world a quarter of a century ago, established the first American school dental clinic in 1905. The private philanthropy of the Public Health Association initiated this work. A lecture campaign was conducted for a fortnight in October, 1910. There are now three school dental dispensaries where in 1912 over two thousand patients were treated at a cost of \$1.12 for each child.

Rochester, New York, leads in public health progress, as Rochester, Minnesota, does in private surgery.

Chicago has taken over the work inaugurated by private funds. Ten dental dispensaries and eleven dentists were pro-

vided for in the Health Department appropriation for the year 1914. Over 26,000 children were examined in 1913 and the dispensaries accounted for 18,000 fillings, 14,000 extractions, and 27,000 treatments. New York City has six dental clinics in addition to the fourteen connected with general dispensaries or dental colleges. Only children between six and eight years of age can be treated. The Board of Health supplied nine nurses to assist the nine dentists in 1914. So small a city as Bridgeport has appropriated \$5000 to provide not only for a dental clinic, but for the monthly supervision of children's teeth by the dental nurse.

A free dental infirmary has been established in Boston in a perfectly equipped building. The Forsyth Dental Infirmary for Children ministers to the 230,000 children in Boston and its suburbs. A two million dollar endowment supports a private philanthropy that co-operates with the municipal authorities. The purpose is to care for all children under 16 years of age. The Division of Child Hygiene of the Boston Board of Health examined the children of the Boston public schools in 1914 and found only forty thousand out of 118,781 without defects.¹ A few months after it was opened the Forsyth Infirmary was caring for 300 children a day. Its work is not limited to dentistry but covers the whole field of oral hygiene. A research fellowship has been established; the building includes a museum; its hygienic precautions may be measured by the sterilizing of 45,000 instruments daily, and the substitution of fresh linen for the outer clothing of patients and staff in the operating room.²

Dr. William Osler is quoted as saying, "If I were asked to say whether more physical deterioration was produced by alcohol or by defective teeth, I should say unhesitatingly, defective teeth."

MUNICIPAL HOSPITALS

Many cities have municipal hospitals now in addition to the private endowments. Small cities like Ithaca and Yonkers,

¹ A total of 100,000 defects included: defective nasal breathing, 9693; hypertrophied tonsils, 25,121; defective teeth, 51,340; defective palate, 371; cervical glands, 13,711.

² Dental clinics strictly under the board of education are now conducted in Rochester, Cincinnati, Muskegon, Philadelphia and Elmira.

New York, are equipped with architecturally beautiful and scientifically well appointed municipal hospitals. Kansas City has a hospital on a hill overlooking the Union Station, the main part of the city, and the Kaw and Missouri River valleys. The Louisville municipal hospital consists of eleven buildings occupying five acres in the heart of the city with separate provision for white and colored people.

Private hospital provision is too precarious for the poor.

The most ambitious municipal equipment in the country is that of Cincinnati. In the first place the new hospital is connected with the medical school of Cincinnati University, itself a municipal institution. The hospital may be stretched to the accommodation of 1500 patients. It is situated on a 27-acre plot, fortunately adjoining another city-owned tract of 38 acres, where day camps for weak and sick children and adults will be established. The hospital is a center not only for patients, but for medical education. It is provided with a large amphitheater and laboratories to facilitate scientific investigations. "Observation wards" are to be conducted as an incentive to preventive medicine. Patients will be kept there until a definite diagnosis is reached. There are twenty-five completed buildings, but twelve more may be accommodated on the tract. The buildings include a group for contagious diseases. All the structures are as nearly fireproof as possible. The foundations are of concrete, waterproofed and underdrained. The hospital wastes are to be disposed of according to the latest dictates of science. Each ward kitchen includes an incinerator, while the power house takes care of the bulky waste in its large crematory. Cincinnati has also built a tuberculosis sanatorium beyond the city limits. It has a capacity of five hundred beds. Three hundred of the thousand patients discharged in three years were found to be earning a total of \$600 a day, or \$219,000 a year. This does not touch the gain that comes from preventing infection in the family by the segregation of patients.

The sporadic character of American municipal progress is shown by the superior hospital and school provision of so badly governed a city as Cincinnati.

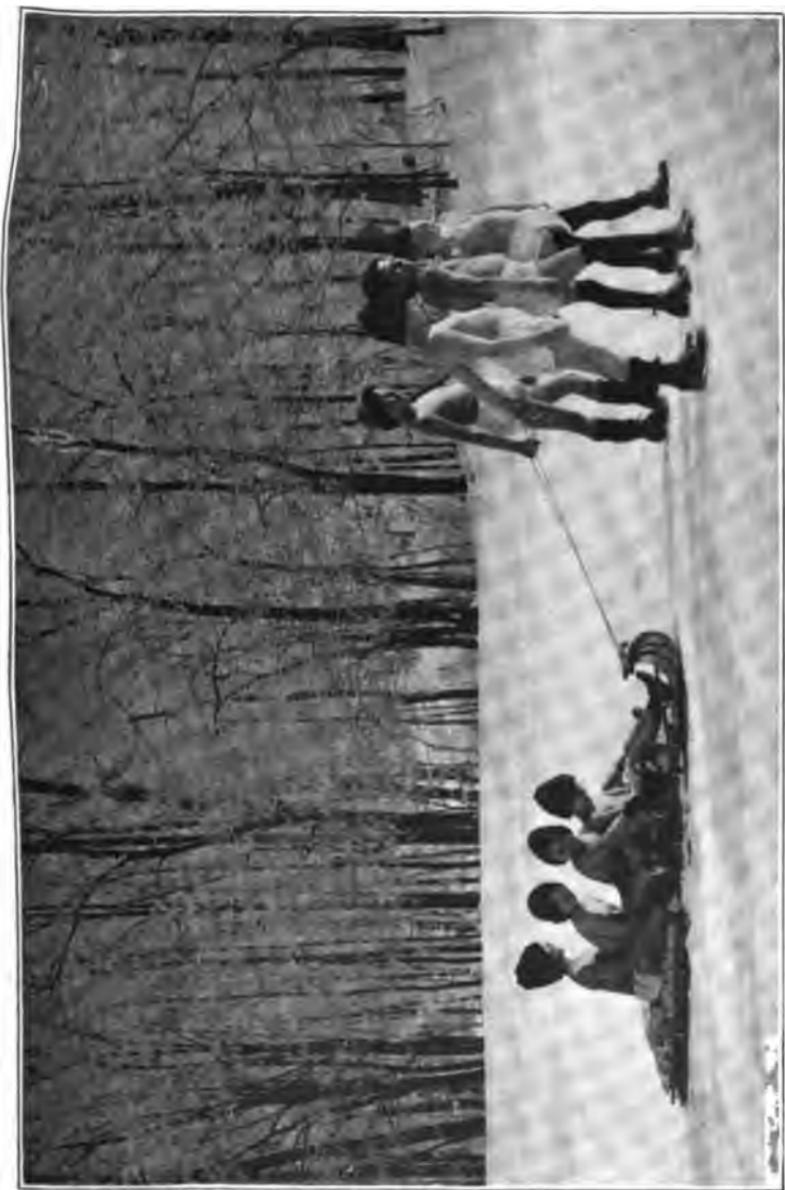
TUBERCULOSIS HOSPITALS

The history of the anti-tuberculosis agitation in Cleveland is a hopeful indication of the way voluntary agencies take the first initiative and then, as public sentiment grows, the movement is socialized. In six years' time the agitation had resulted in the establishment of a Bureau of Tuberculosis in the Health Department. Two dispensaries were added to the private equipment and fourteen visiting nurses were employed. The bureau is supported by an annual appropriation of \$39,000. Then a sanatorium was erected, costing \$36,000 a year, and a hospital for advanced cases, costing still more. In 1914 the Bureau of Tuberculosis was responsible for six dispensaries, six physicians, twenty-six nurses and a day camp. The School Board was operating eight open air schools. A new sanatorium cost \$138,000 a year, while the hospital for advanced cases demanded \$55,000 annually for its support. The hospital service is now furnished at Warrensville, in connection with the Cooley Farms, so that the administration is exceptional.

A city that is willing to make such expenditures cannot fail to seek the sources of the disease.

The Chicago Municipal Tuberculosis Sanitarium was authorized when the Illinois legislature provided in 1909 a special municipal one-mill sanitarium tax for any city that adopted it by referendum. The voters indorsed this plan four to one. The sanatorium maintains ten dispensaries with a staff of thirty-five physicians and fifty field nurses. The purpose of the sanatorium is not to house all the patients, but to encourage them to be cared for at home. A Bureau of Special Relief assists in "remodeling and building inexpensive sleeping porches, supplying the necessary equipment for outdoor sleeping, such as beds, bed clothing, reclining chairs, canvas curtains." The law specifically says that it confers power "*to stamp out* tuberculosis in such city." The sanatorium itself is situated on a 160-acre tract in the northwest section of the city. It is designed to duplicate the beds now furnished by private philanthropy. Among its departments are a maternity section and a nursery for infants of tuberculous mothers.

In 1905 Chicago had 200 beds for advanced cases of tuberculosis, of which 150 were in the poorhouse. In 1915 this number increased tenfold.



Photograph by Haze.

CHILDREN TAKING THE SUN CURE FOR TUBERCULOSIS.
The City of Buffalo Hospital for Incipient Tuberculosis, Perryburg, New York.

New York with 40,000 consumptives was equipped with 3000 public and private beds in 1914. Eleven thousand different patients were admitted to the tuberculosis hospitals in 1913. About one-half of the applicants had to wait for admission until some one died or was discharged. The hallways of the Metropolitan Hospital were lined with double rows of beds. In consequence of an awakening to its deficiency, New York built the Sea View Hospital on Staten Island to accommodate 1000 surgical tuberculosis patients and made provision for more than one hundred in each of three other hospitals. During the summer of 1911 stereopticon lectures were given in the parks under the Department of Health. Sixteen lectures were given to an average attendance of 2000. In 1912 motion pictures were substituted for lantern slides, with an attendance of 5000. In 1912 the Department of Health opened eight special children's clinics, thus increasing the number to thirteen. The clinics reported that 10,000 children were living in tuberculous families.

The new type of New York tenement does more than all the movies to combat tuberculosis.

Boston's achievement thus far is in undertaking comprehensive municipal control with the purpose of eradicating the disease. An educational campaign has been carried on; bulletins and posters have been issued. In 1906 a Consumptives' Hospital Department was created by the City Council. A 58-acre tract of land has been bought in Mattapan for the erection of the municipal hospital for consumptives. The estate is within the city limits on a trolley line. The plan involves six ward buildings, administration, dormitory and scientific buildings. The work was carried on at first in two ward pavilions, a day camp and a cottage ward. Each ward building of fifty-eight beds cost about \$62,000. They are for the care of the advanced stages of consumption. It is expected that all the destitute will be provided for.

The sanatorium day camp is an economical method of caring for people whose situation makes it possible for them to spend their nights at home. The building for this camp is one story high, 150 feet long, and 36 feet wide, with a porch 16 feet wide. It is sheltered by rocks and trees on the north. The out-patient department attempts to bring to the clinic all members of the family of a tuberculous patient. The hospital attempts

to reach the entire community by coöperation with the Board of Health, inspecting and registering all cases of tuberculosis, furnishing obligatory free disinfection after the death or removal of a consumptive, conducting a bacteriological laboratory and inspecting schools and school children by a staff of eighty physicians and twenty school nurses.

A Massachusetts law requires every city and town of more than 10,000 inhabitants to establish and maintain a tuberculosis dispensary satisfactory to the State Board of Health.

The Buffalo Hospital has a remarkable adjunct in the J. N. Adam Memorial Hospital for the treatment of incipient tuberculosis. It is located at Perrysburg overlooking the Cattaraugus Valley, Lake Erie and the Canadian shore. The equipment consists of two pavilions for children and a building for employees. Each of the pavilions will accommodate 60 children; one pavilion is for tuberculosis of the bones and joints and the other for tuberculosis of the lungs. Dr. John H. Pryor has here inaugurated the sun cure for Buffalo tuberculous children. The beautiful grounds enable the children to spend the day in the open. The treatment involves exposure of the body to the sun for from four to six hours a day.

These children of Nature go tobogganing clad only in a loin cloth.

HOSPITALS FOR INFECTIOUS DISEASES

A new contagious disease hospital in Chicago has been provided for by bond issues amounting to \$550,000. The \$300,000 now available will provide for one ward building containing 132 beds and for the administration building. A second building with similar accommodations will be built with the \$250,000 issue. The hospital when completed will consist of an administration building, five ward buildings, nurses' building, superintendent's residence, kitchen and dining pavilion, ambulance garage and morgue, involving a total cost of well over \$1,000,000.

Many cities have compelled infectious cases to make vain pilgrimages from hospital to hospital.

When a smallpox epidemic struck Rochester in 1902-1903 they were unable to house the patients. In consequence of this scare, an 80-bed hospital was erected. By this time smallpox had disappeared. The hospital consists of a central ad-

ministration building and four 18-bed, one-story wards, the superintendent's house, nurses' quarters, recreation building, kitchen and laundry. Two pavilions of twelve and six rooms respectively with accompanying conveniences were set aside for smallpox. These have been now devoted to infectious diseases — diphtheria, scarlet fever, measles, whooping cough, typhoid — as the city is free from smallpox through the enforcement of the school vaccination law and the refusal of large employers to employ unvaccinated people. With enrollment of forty patients it has not been found necessary to use disinfectants. The precautions taken are summed up in cleanliness — careful washing of the hands with soap and water, drying with paper towels, and a separate gown for each disease. In treating seven hundred patients there has been less than 2 per cent of cross infection. The highest efficiency is thus secured, while the four nurses enjoy an eight-hour day.

The hospital is for those who cannot pay. The average annual income from patients does not equal \$500.

SWAT THE FLY!

America has at last awakened to the pest of the fly. It has discovered that flies are more dangerous to civilized man than all the wild beasts in the world. Americans read with pride that the army has made Manila a flyless city; some citizens of continental American cities are endeavoring to rival the success of our army in the Orient. A campaign of education has been carried on in many American communities during the last few years and a successful endeavor to cope with flies has begun in a few of them.

The achievement of Cleveland inspired over one hundred towns to write to the authorities for information. The Board of Health of Cleveland, with the support of Mayor Baker, inaugurated a campaign, organizing the children of the sixth, seventh and eighth grades of the public schools. The schools were used as distributing centers for literature. The campaign was initiated by Doctor Jean Dawson, a professor in the Cleveland Normal Training School for Girls. She has organized the boys into Junior Sanitary Police and the girls into Sanitary Aides. The boys inspect back yards and inform householders

of the conditions of their garbage cans and other fly-breeding places. If there is no response, the boy refers to his senior officer. Unless results are achieved by this friendly method, the Street Cleaning Department may be invoked to supplement the work of the boys. The girls, working in pairs, have inspected stores and counted the number of flies visible in three minutes. The city seems to have been thoroughly aroused and the new sanitary code provides for the removal of all fly-breeding refuse every seventy-two hours. In the interim it must be inclosed in insect-proof receptacles. The great achievement of Cleveland is in arousing the entire population to the significance of the early fly.

A fly in the hand in March is worth two thousand in the kitchen in August.

Before this the city of Wilmington, Delaware, had achieved distinct success in a campaign conducted by Dr. Charles T. Nesbitt, Health Officer, a campaign carried on entirely at public expense. The close connection between the annual epidemic of typhoid and the first spring flies led to an attack on the breeding places of the vermin. It was decided to disinfect the entire town with a by-product of the distillation of turpentine. Between June 8 and July 17 the entire city had been sprinkled four times with this pyroligneous acid. Beginning with one case of typhoid reported on June 1, the maximum of ten cases reported in a single day was reached June 15. After the second disinfection the number of new cases steadily diminished until only five cases all told appeared after July 10, although the fourth disinfection had not then begun.

The campaign of education in Rochester, New York, began in May. The life history of the fly was shown from its breeding places in manure and filth to its fatal climax. It was shown that the 15,000 horses encumbered the city with manure that would make a pile covering an acre of ground 175 feet high. This alone would account for 16 thousand million flies. The Health Bureau secured 10,000 fly swatters and a large number of fly traps. With the aid of private philanthropy prizes were offered for the destruction of flies on Saturday, June 14, and thus a spectacular campaign was inaugurated with the aid of the children.

“Knee deep in June” may be hygienic as well as poetic.

The range of successful agitation against the fly extends already

from the Atlantic Coast to the Pacific and from the Great Lakes to southern Texas. Blue Earth, Minnesota, and Pokomoke, Maryland, may serve as examples of small communities in which the screening of business places and the setting of large traps at the curbs have almost completely rid the community of flies. Redlands, California, appointed an official flycatcher. He supervised five hundred fly traps in 1914. Fifty gallons of dead flies a month were taken from the hundred traps in the business district.

A movement may be national in scope and still local in expression.

MOSQUITOES

Similar campaigns are being waged against mosquitoes. The breeding places are sought out and thus a more effectual method than swatting is employed. Essex County, New Jersey, which includes populous New York suburbs and the big city of Newark, spent \$65,000 in 1913 in the war against mosquitoes. It was necessary to destroy the breeding places in both salt marshes and fresh ponds. One inspector with nine laborers spent all the summer in ditching and draining marshes. The city of Newark and the state of New Jersey had already cut 900,000 feet of ditches before the mosquito campaign began. The Mosquito Extermination Commission cut 250,000 feet in 1912 and 350,000 in 1913.

One encouraging result of draining salt marshes is that two crops of hay are produced each season instead of one.

The fight against fresh-water mosquitoes was carried out by oiling sewer catch basins, removing rubbish about all private premises, and oiling receptacles that might prove breeding places. Inspectors covered their entire territory every ten days in hot weather and every fifteen days in cooler weather, assisted by a force of laborers who buried cans, opened ditches, and filled holes, endeavoring to drain all standing water. In 1913 over 1000 cisterns, 7000 catch basins, 500 cellars, 4000 pools and swamps and 300 brooks were inspected. Over half a million visits were made to private premises. Meadows and pools have been filled with refuse from the Jersey suburbs and New York. Refuse from the metropolis was spread over sixty acres of breeding territory in 1912.

Baltimore's campaign of 1915 was inaugurated and directed by General Gorgas.

In the fall of 1912 the Board of Health of Greenwich, Connecticut, admitted that there had been 600 cases of malaria which the physicians thought 50 per cent short of the truth. It was difficult to agitate because of the fear that the reputation of the town might be injured. Nevertheless, public-spirited people did organize a Health Association. The Health Department was reorganized and \$23,000 spent in inspecting, ditching, draining and oiling a territory about one and one-half miles square in a township seven by nine miles in size. The work was begun late in the summer of 1913. Yet only 200 cases of malaria were reported that summer. In 1914 only 30 cases were reported, and it was claimed that two-thirds of these were hold-overs.

The mosquito may not have been annihilated, but "she" has been subdued in Greenwich.

Philadelphia began its mosquito campaign by an extensive propaganda, especially in the schools. In the spring of 1913 twenty illustrated lectures in the life history of mosquitoes were given by the city entomologist in churches, schools, libraries and lodge rooms. The public school teachers were persuaded to talk to the children on the subject. One hundred thousand pamphlets were distributed among school children and 100,000 more to householders. Then followed the treatment of pools and sewer inlets, the greatest attention being given to the low-lying area in South Philadelphia. This land is so low that dykes are necessary to keep out the river water. Ditches must be operated with sluices to meet the variation of high and low tide. Forty-four acres were drained in 1913 and seventy-five in 1914, involving the cutting and cleansing of sixty miles of ditches.

A practice was followed, that is now becoming general, of eliminating undesirable ponds instead of merely oiling them. By dynamiting the hard bottom of many of the ponds it is possible to pierce the hardpan so that the water sinks through to the porous ground below. In time the area is completely drained.

San Antonio has erected a large municipal bat roost to harbor this effective foe of the mosquito.



MOSQUITO BREEDING POND BEFORE BLASTING.
Philadelphia.



Courtesy of the Department of Public Health and Charities, Philadelphia.

AFTER BLASTING — WATER HAS ENTIRELY DISAPPEARED.
Philadelphia.



STARVE THE RAT!

A war on rats has been waged in American cities, partly because cases of the bubonic plague have been brought in by Pacific steamships and partly because it is feared that the opening of the Panama Canal may have increased the danger. It would be worth while to destroy rats because of their menace to property — it is claimed that they dispose of \$90,000,000 worth of goods in the United States annually — but it is imperative to eliminate them if we are menaced by plague. San Francisco has spent hundreds of thousands of dollars in protecting itself against rats. Even squirrels are being pursued in California because they have been infected by rat fleas, which are the carriers of the germs of the disease.

New Orleans is said to have spent \$25,000 a week during quarantine.

Philadelphia has carried on a campaign against rats, offering a bounty of two cents for a dead rat and five cents for a live rat. The Health Department was enlarged in the summer of 1914 by the addition of a chief inspector, six inspectors, a bacteriologist, and subordinates for the patrol of the river section of the city. Every building has been inspected and many old ones have already been rat-proofed. Each vessel is compelled to use a rat guard if it comes from an infected port. A rat receiving station was opened at the Race Street Pier, where over 5000 domestic and 238 imported rats had been received up to January 1, 1915. This campaign has also been waged through propaganda, distributing literature and giving lectures, showing the methods of reproduction and destruction.¹

The New York Commissioner of Health picturesquely says, "Public health is purchasable."

¹ Appendix 5.

CHAPTER VIII

PROTECTION

THE traditional purpose of American government is the protection of life and property. The protection of property has been considered so much more important than the saving of life that the organization of public health bureaus has lagged behind fire and police departments. The property instinct is so deep rooted in the American people that the fire department is generally the best organized division of municipal government. American cities, in fact, have the best fire departments in the world. Yet the same property instinct that demands efficient fire protection permits the erection of buildings that necessitate these superior fire departments. Europe spends about twenty cents per capita for fire protection, while the United States spends \$1.55. In spite of this discrepancy the per capita fire loss in Europe is thirty cents a year and in the United States about three dollars.

American fires, like European armies, relieve the problem of the unemployed by making needless work.

The chief agents for efficiency in the fire service in American cities are superior apparatus, superior organization of the department, a superior water system, the assessment of damages where they belong, better building laws and fire prevention propaganda. The noteworthy improvements in fire apparatus are in the substitution of motor for horse-drawn vehicles, in automatic fire-protection and fire-alarm devices, and in fire boats. The value of fire apparatus is determined largely by the speed with which it reaches the fire. In this respect the horse is unable to compete with the motor vehicle. In some cities horses are kept in reserve, chiefly for use in snowstorms. Springfield, Massachusetts, seems to lead the country in its motor equipment. In 1914 with a population of 90,000 its department had thirty-

two pieces of motor-propelled fire apparatus.¹ The cost of maintenance of the motor vehicles of Springfield is one-third of what it was for horse-drawn vehicles, although the number of fire alarms has increased. The motor fire engines have an additional advantage over the old kind; the gasoline engine, having already generated its power, is ready for service at the fire by switching the motor from the propelling machinery to the pump. The only drawback to the speedy introduction of motor vehicles is the previous investment in the older types. This loss is being partly overcome by reconstruction of the equipment. The motor vehicle is invaluable also for the fire commissioners and chiefs. Boston has already standardized its cars so that the fire department had in 1914 twenty-seven uniform cars, one for the commissioner, one for the chief, and one for each district chief.

It is estimated that over \$10,000,000 is invested in over 2000 motor vehicles by more than 800 cities.

Automatic sprinklers are included in the construction of the best fire-proof buildings to-day and in many of the high class theaters. It is possible in this way to drop an apron of water over the front of a building or the stage of a theater. Big stores and office buildings also have devices in the ceilings whereby a sheet of water is set free automatically by a sufficient rise of temperature.

It is hard to keep warm under damp sheets.

Cities on waterways employ fire boats in order to get a powerful stream of water by using a less costly source of supply, pumping it by engines, the latest of which is equivalent to twenty city fire engines. The fire boats not only protect docks and shipping, but are able to reach fires within a block or two of the water. The fire boat can send out two or three large streams and fifteen or twenty small ones. The newest have metal masts like battleships, from which streams may be directed. New York is equipping its eleven fire boats with wireless telegraph, by which they can be recalled, or may be summoned to assist an incoming vessel. The use of the cheaper water supply is extended in some cities by having the fire boat pump water through downtown mains. All the large cities on the Great

¹ See Appendix I.

Lakes have developed such pipe-line systems. In Boston a pipe line runs from one side of the city to the other, permitting fire-boat service from either water front.

There is a friendly rivalry among American municipalities to extinguish superfluous conflagrations. Fire apparatus is often sent from one city to another in the case of great fires.

FIRE DEPARTMENTS

The job of fireman has always been an exacting one, like that of the soldier. It is composed of nine parts of idleness and one of heroism. It has been found difficult sometimes to keep the fireman amused and happy. In consequence there is a tendency to demand a two-platoon system so that each fireman need be on duty only half of the twenty-four hours instead of forty-eight hours in succession, as in the liberal Chicago single platoon system. The two-platoon system is more expensive than the other and its superior efficiency is still unproved. After an experiment of a year in one Chicago battalion, it was abandoned and the plan was defeated in the referendum of April, 1915. The two-platoon system was defeated in the New York legislature in the year 1913. While still in the experimental stage, there is no doubt that the cost of the two-platoon system is one-fifth to one-third greater but that the lives of the men are made more normal.

The experience of Omaha, under legislative restrictions that have not given it quite a fair chance, indicates an increase of about 50 per cent in cost during the seven years' experience. The men have been distinctly benefited by the reduction of their working hours; a large force is within call in case of big fires; and greater adaptability of the department is possible than under the single platoon system. Omaha has influenced Kansas City, where a double platoon system was inaugurated in 1912. The chief of the fire department there is not so enthusiastic as the other municipal officials. Discipline has been found more difficult, but efficiency has been maintained. Seattle has found that the force had to be increased nearly one-third and the cost rather more than that, but that under a firm hand discipline and efficiency are maintained. Cities in all parts of the country are experimenting in the two-platoon system.

Little work and only playing the hose makes Jack a dull fire fighter.

HIGH PRESSURE SYSTEMS

High pressure fire service systems have been introduced into sixteen American cities, led by New York. Some of the smaller cities get the added pressure by gravity. Buffalo and Boston relied on fire boats from 1898 until Boston built a high pressure station in 1912. The pressure of the water in these systems varies from one hundred to three hundred pounds, as compared with perhaps twenty under the low pressure systems. The high pressure system of New York has cost nearly \$9,000,000, almost three times as much as Chicago's, the next largest system.

When an alarm is received at a high pressure pumping station, power is applied to the mains so that many streams may be thrown as high as two hundred feet in one hundred times the volume that was previously available. To throw a stream of water to a great height from an ordinary hydrant requires the assistance of fire engines, but the high pressure system accomplishes the work of a hundred fire engines. In this way 2800 acres of the business sections of New York and Brooklyn enjoy additional protection. The only larger system is that of San Francisco, where the high pressure stations are assisted by a great reservoir on one of San Francisco's hills so that over 5000 acres are served. The Baltimore fire stimulated activity there as the San Francisco fire did in the City of the Golden Gate. Only about 200 acres are protected in Baltimore, but provision is made through the business area so that manholes open at intervals of 170 feet. There are four hydrant connections in each manhole. A line of hose may be used from every fire plug, each under a different pressure, because the plug has a pressure regulator of its own.

The skyscraper transfers much of life from the horizontal to the perpendicular.

FIRE LOSSES

Very little has been done in America in the most economical and logical method of reducing fire losses: namely, more rigorous building codes. New York City provides that its skyscrapers shall be built with standpipes extending from the roof to the

basement with fire plugs on each floor. A water tank on the roof gives abundant pressure. Hose may be operated on the floor on which the fire starts much more expeditiously than from the street or the buildings opposite.

The cost of fire protection each year is almost as great as the fire loss per annum.¹ It is estimated that the cash cost of conflagrations in the United States is \$416 a minute or \$600,000 a day. That, however, refers only to property destroyed. We have to support unnecessarily good fire departments to protect our very defective property. To neutralize the shameless carelessness of citizens we have to increase enormously the service of our water departments and pay heavy insurance premiums. As a consequence of these fires industry is interrupted, there is a grave loss of employment, and, worst of all, destruction of human life amounting to two thousand persons a year, while those incapacitated number six thousand. Apart from the waste of life, the mere pecuniary loss is nearly half a billion dollars a year.² A Federal report for 1907 shows that this fire loss exceeded the total value of the gold, silver, copper and petroleum produced in the United States for that year. It shows also that one-half the value of all the new buildings constructed in one year goes up in smoke. "The buildings consumed annually, if placed on lots of 65-foot frontage, would line both sides of a street extending from New York to Chicago." A large part of this might be saved by reasonable building regulations which are stupidly fought by people who suffer from the losses.

Locking the barn door after the horse is stolen is not a bucolic weakness. It is an urban habit.

FIRE PREVENTION

For a long time we have tried to cope with this terrible fire loss by improving our fire departments. We are now more wisely undertaking fire prevention. In consequence of the awakening due to the Triangle Shirt Waist Factory fire in New

¹ For a comparative statement of fire protection cost see Appendix 2.

² Bulletin No. 418, United States Geological Survey, estimates the total annual fire loss at \$215,000,000; fire premiums, in excess of losses paid, \$145,000,000; expense of water works chargeable to fire service, \$29,000,000; expense of fire departments, \$49,000,000; fire protection, \$18,000,000 — a total of over \$450,000,000.

York, when 145 factory workers were needlessly burned to death, the city created a Bureau of Fire Prevention. This department has charge of all inspections except those of public amusements. It has succeeded in installing sprinkler systems, multiplying exits and fire escapes, removing obstructions, correcting electrical equipment and heating and power plants, installing fire appliances, fireproofing and fire alarm systems, encouraging fire drills and controlling combustibles.

Any holocaust is a tragedy, but a repetition of it is a crime.

A uniformed force of the fire prevention department now makes monthly housekeeping inspections to the number of 100,000. Lectures are given to civic societies, Young Men's Christian Associations, Boy Scouts and schools. Fire Prevention Day is celebrated on October 9, the anniversary of the Chicago fire. This occasion prompts the clearing up of rubbish,—a fruitful source of fires,—overhauling heating apparatus and fire extinguishers, holding fire drills in the public schools and factories, conducting a fire apparatus parade and using churches and moving-picture shows to educate the people. Great ingenuity was used to impress upon the people the significance of the New York fire loss of 1913, which was over \$7,000,000, caused by nearly 13,000 fires, largely preventable. It has been estimated that 60 per cent of fires are due to sheer heedlessness. This is not difficult to believe when it is observed that superfluous rubbish and the reckless handling of matches and tobacco are responsible for over \$100,000,000 of our annual national losses.

“There is no smoke without fire.”

The fire chief of Murphysboro, Illinois, has established an invaluable precedent by enlisting the services of the school children for fire prevention. More than five hundred school children in this small town wrote essays dealing with the fire risks of their own homes — bad construction, defective flues, rubbish and such things. When the fire chief set to work to remedy these menacing conditions, he confronted obdurate citizens with evidence presented by their own children.

The cities of Kansas use in their schools literature sent out by the State Fire Prevention Bureau.

Another promising method of fire prevention is being applied in New York. The Appellate Division of the Supreme Court has decided that the cost of putting out fires may be assessed on

property owners who have been negligent. One New York corporation was compelled to pay \$1500 to the fire department because they had ignored the order of the Bureau of Fire Prevention to install automatic sprinklers. Similar defiance of the authorities has led to the fining of another organization \$750. If the cost of fires can be laid upon the people responsible for them, the number of conflagrations will rapidly decrease. A successful and far-reaching agitation has been carried on against incendiaryism. Refusal to obey the mandate of the city is now putting the lawless landlord in the category with the incendiary.

A burnt child dreads the fire.

POLICE

The beginnings of police administration in American cities were made in the employment of night watchmen. When a city police service was organized in New York in 1845, it was entirely distinct from the enforcement of the law outside of the city. There still remain twilight zones in most centers of population. The absence of any state or national police service, the multiplicity of American laws and the lack of home rule for cities have made police administration peculiarly difficult. The progress that has been made in the face of these obstacles is most encouraging, but the policeman is still denied the latitude that is necessary to the enforcement of the law.

A thoroughly satisfactory police service can only follow a desire on the part of the people to have the law enforced and a willingness to pay for talent, as well as physique and character.

Policemen, generally, are required to pass civil service examinations, including a physical examination, and then are placed upon an eligible list from which they are drawn experimentally to a permanent appointment. Limited as are the policeman's powers, they are much too great for the wages he receives. He is often paid as little as \$2.50 and even \$2.00 a day. In New York and Boston alone do the wages rise over \$3.50 a day. In many cities pensions are also provided, but these are often inadequate and in some instances, as in Washington, the pension law becomes a dead letter.¹

¹ The per capita cost for police protection varies from \$1.19 in New Orleans to \$3.48 for San Francisco, and the average number of patrolmen to 10,000 inhabitants

A day laborer's pay usually buys a day laborer's services.

The reorganization of the police department of Chicago, as a result of the investigations of the Municipal Efficiency Commission in 1910, throws light on the responsibilities of the police force. The organization is divided on the basis of outside and inside work and put under two bureaus — an active and a clerical bureau. The first division of the active bureau is that of detectives. Men may be promoted from the police department to the detective department as officers, but may not return to the police department. Political juggling is thus eliminated. A second branch of the active bureau is the traffic division, charged with the daylight handling of traffic. This includes both mounted and foot policemen. There is a patrol division with a captain in charge of each police district, who is held responsible for the enforcement of laws, ordinances and police rules. Each district keeps a record of all undesirable characters known to be frequenting that region. Another department is the ambulance division, in charge of the chief surgeon. There are also signal, horse and miscellaneous divisions. Under miscellaneous divisions come the motor, pound, marine and vehicle sections. The inside work is in charge of a clerical, a mechanical and an inspection bureau. This reorganization of the police department has developed specialization and located responsibility so that duplication and waste are minimized and corruption may be located.

A private detective system is a confession of incompetency or corruption.

Two-, THREE- AND FIVE-PLATOON SYSTEMS

In the pursuit of efficiency there is at present a vast amount of experimentation to determine the respective merits of the two-, three- and five-platoon systems. A greater elasticity than in the fire department is possible, but there is the same dual purpose of efficiency and humanitarianism. Most American cities employ the two-platoon system. Under this plan one-fourth of the force is on patrol during the day, one-half at night and the other fourth on reserve all of the twenty-four hours.

varies from 7.3 in Minneapolis to 21.9 for Washington, D.C. For the relative size of police departments of thirteen cities see Appendix 3.

On one day in four each man is required to be on call all twenty-four hours. On two of the other days each man has twelve hours off, and on one day only two hours off. This system commands the services of a large proportion of the force, but gives the policeman too little leisure.

Perhaps Arnold Bennett had a policeman in mind!

The three-platoon system is based theoretically on the eight-hour day. This has to be modified by the necessity of having more men on duty at night than during the day, by keeping men for emergency and special detail, and by making allowance for meals and family duties. Each policeman, however, patrols not more than eight hours a day. The minimum of service, therefore, is one-third of the force during the daytime. It leaves too small a reserve force, when one considers the inevitable loss of time due to natural disabilities. It requires such a division of labor of the individual that his free time is often not consecutive, so that recuperation and recreation are difficult. The Director of the Department of Public Safety of Philadelphia indorses the three-platoon system without hesitation. Under the old plan the men were frequently overworked; under the new they come fresh to their detail and give better service after having enjoyed family life in their leisure. Philadelphia has not found the three-platoon system more expensive than the other.

No system is desirable that invites celibacy.

New York has tried to solve this dilemma by uniting both the two- and the three-platoon systems. Under this plan twice as many men are on patrol duty at night as in the daytime. Six consecutive hours of patrol service is the maximum. Each policeman has one full day off in every five and the briefest period of leisure is twelve consecutive hours. Patrolmen are allowed to sleep during their period of reserve duty except in cases of emergency. House duty is distributed equally among the force. This seems to promise the highest degree of efficiency in the public service, combined with the greatest benefit to the policeman.

Inadequate life preservers are poor economy in the ship of state.

HUMANIZING THE POLICE SYSTEM

Toledo and Cleveland have established precedents in the organization of the police force that may well spread to the other cities of the country. Under Golden Rule Jones in Toledo and Chief Kohler's Golden Rule policy in Cleveland, the old idea was punctured that police exist to arrest people. Cities everywhere have suffered from the freedom with which policemen exercised their personal enmities or yielded to graft, trumping up evidence that it was difficult for the defendant to refute. Policemen in Toledo were instructed not to arrest persons on suspicion. If any person were so arrested, he was given a speedy trial. Mayor Jones's attitude, emulated by Mayor Whitlock, was that of sympathy, not antagonism. The policeman and the citizen were both presumed to be human.

Indianapolis forestalls cold feet by attaching a register to the steam-heating system for the downtown policemen to stand on.

Cleveland has elaborated the Toledo experience until all of its correctional institutions have been permeated. Corruption has been nailed, while vice and crime have been reduced. Most people are put in jail in America for drunkenness, vagrancy, and disorderly conduct, and are thereby given their first opportunity to become criminal. This practice was broken up in Cleveland and the arrests were reduced from over 30,000 a year in 1906 and 1907 to fewer than 8000 in 1910 and 1912. The success of this Cleveland endeavor was due largely to trusting the policemen. They were not to arrest people for first offenses but to warn them. A drunken man was taken home instead of to jail. This method has been encouraged by crediting the policeman 50 per cent on his record, as compared with examinations for promotion.

The policeman no longer rushes his arrests at the end of the month so as to increase his batting average.

POLICE MATRONS AND POLICEWOMEN

The entrance of woman into the police system was made when the Women's Christian Temperance Union succeeded in securing the appointment of a matron in a Maine city. The idea was violently opposed by the eternal male, but the result of the experiment was such an unqualified success that the police

matron is now, fortunately, universal. Sometimes, in the smaller cities, where there are few women offenders, the police matron is only summoned from her residence when needed. In the larger cities a matron is on duty every hour of the day and night. The matron calls in the assistance of men when needed for the physical control of her prisoners, but usually has entire charge of the women and children. The segregation facilitated by matrons has been promoted in Detroit by a police station for women. Criminals, insane prisoners and women of the streets are absolutely separated from the homeless and from witnesses.

Each Pacific coast state includes a city that has organized a Department of Public Safety for Women and Children — Tacoma, Portland, Oakland.

The appointment of policewomen met the same opposition that had been shown to police matrons by the belated enemies of the obvious. The multiplication of women offenders is due to the mobility of population and the looseness of city life. The cave man's antagonism that has proved so futile in the case of women doctors and nurses becomes equally ridiculous when directed at policewomen. The old-fashioned male, incarnate in the traditional chief of police with his sarcasm and his lewdness, has disappeared or been repressed by the prompt success of this innovation. The position of woman police officer was created in Los Angeles in 1911. The first incumbent, Mrs. Alice Stebbins Wells, has not only served very satisfactorily, but has been a propagandist in the movement to secure police-women in other American cities. Other policewomen have been added in Los Angeles, and a "City Mother," to meet parents and children confidentially, away from the police station or courts. At least thirty cities now total more than twice that number of policewomen, Chicago alone including thirty in its department.¹ There is no geographical limitation, except that San Antonio is the only city south of Baltimore to follow Los Angeles in the appointment of policewomen.

Women and children get scant protection in the land of chivalry.

¹ For a list of cities employing policewomen and the approximate number employed in 1914 see Appendix 4. All Massachusetts cities have been authorized to appoint policewomen.

The mayor appointed the first policewomen of Chicago immediately after the adoption of equal suffrage. The demand for them was the result of the exposures of the Vice Commission. Their first duties were the supervision of public dance halls, in which they have been assisted by a body of devoted women volunteers. A couple of policewomen have visited each of the dance halls at least once a season and dance hall managers now welcome them. The policewomen have cleaned out rest rooms of department stores, some of which had become the haunt of undesirables. The liberties taken by men in motion-picture theaters and railway stations have been checked by the policewomen. Their attentions have been valuable to the children, old men and immigrants. The school supply and other stores that have sold demoralizing things to minors have been much better regulated since the advent of the policewomen. Restaurants, saloons and pool rooms have been better supervised since the policewomen undertook the protection of women and minors. "Questionable flats and shady hotels have been investigated." Two policewomen are in the detective force. They have been invaluable in getting evidence against flirts, and "Help Wanted" scoundrels.

That the police force becomes more efficient as well as more human when it becomes less masculine is the testimony of the police authorities of Los Angeles and Chicago.

TRAFFIC POLICE

The contrast between the regulation of traffic in European and American cities was long a source of humiliation to the American traveler. The transformation of the methods of the leading American cities, due primarily to the advent of the automobile, has been rapid and spectacular. Philadelphia seems to have been the pioneer in organizing traffic squads of mounted policemen. In 1904 two squads of ten mounted patrolmen were assigned to duty on the leading business street of Philadelphia during the Christmas holidays. The repetition of this experiment in the following year led to the permanent provision of the traffic squad. The force has grown to nearly four hundred, of whom over one hundred are mounted and over fifty are on motor cycles. The heart of the city from one

river to another is thus patrolled, each man serving eight hours. In the market districts the squad begins as early as three o'clock in the morning. In the theater district it remains on duty until midnight. These are selected men who have been tried out before assignment to the congested districts.

Men of different temperaments are needed for the varied tasks, the early morning market teams making different demands from the afternoon shoppers or the maelstrom of the rush hours.

The traffic policeman must also have a knowledge of the city comparable to the librarian's knowledge of books. He must know the location of all important places, businesses and street car routes. He must assist all varieties of people, watch the drivers of all kinds of vehicles, see whether the motors are tagged, be alert to prevent accidents or to render assistance in the most effective way when needed. In the late afternoon the traffic policeman on the east side of the City Hall is called upon to watch nearly 150 street cars and over 1000 other vehicles per hour.

The traffic policeman must be a cross between a city directory and a foot ball referee.

The traffic squad is assisted by traffic rules which drivers and pedestrians have gradually come to understand. Safety zones, marked by red disks with white letters for the protection of pedestrians, were first established in Philadelphia. It also claims to be a pioneer in the nearside stop of street cars. Philadelphia, like Boston, has one-way streets, in which the traffic can move in only one direction. This is simplified in Philadelphia by the fact that usually the trolley cars run only one way on one track in the downtown streets. Automobiles are parked in the middle of Broad street, where there are no trolley tracks.¹

The traffic policeman's function is not to "arrest," but to keep moving.

If Philadelphia was the pioneer, New York has elaborated and perfected traffic regulation beyond any other American city. All are now imitating these methods, and some of the cities have begun to control the movements of pedestrians by forbidding them, as well as drivers of vehicles, to cut corners. Cities as

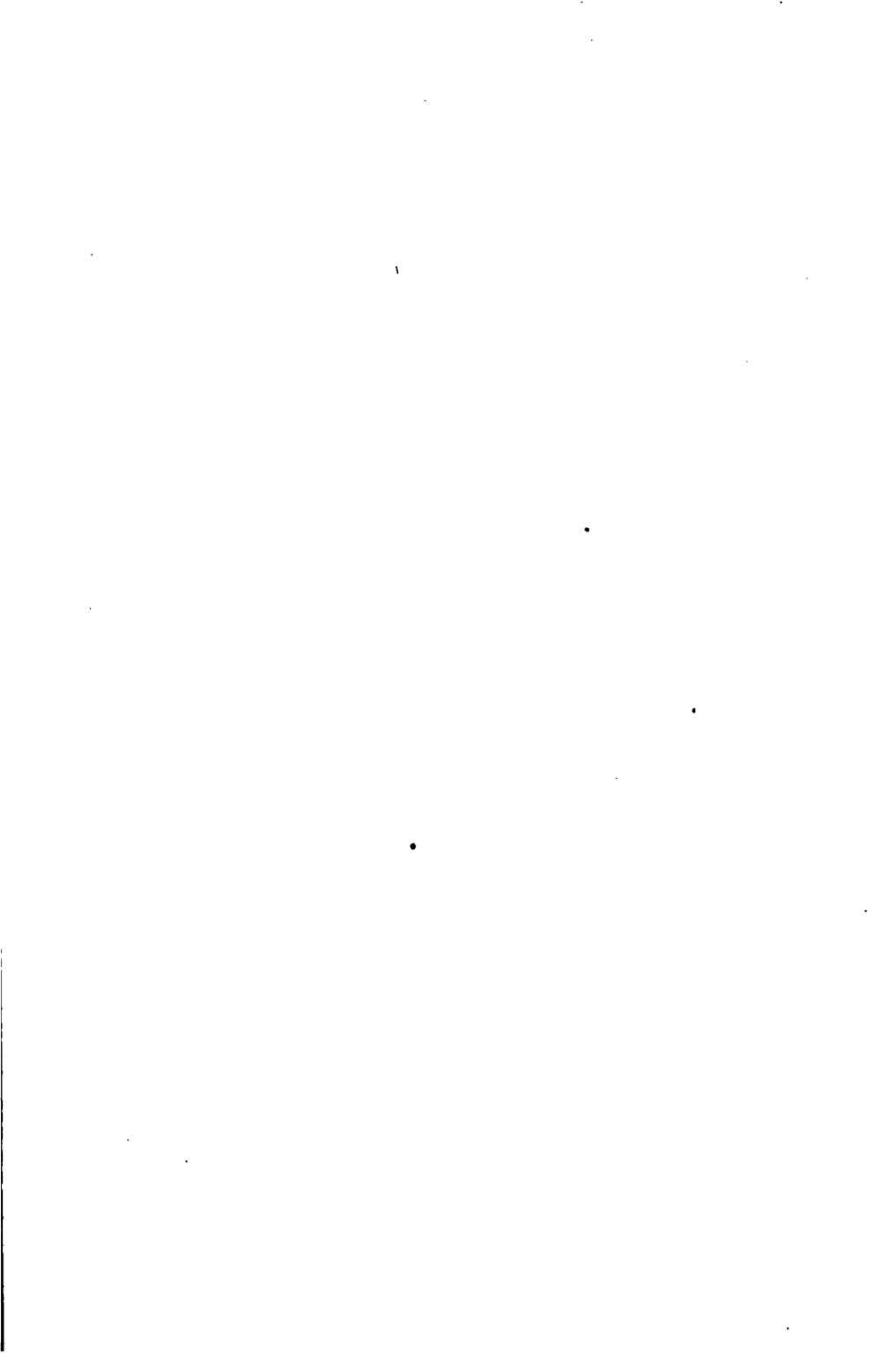
¹ Pittsburgh and Cleveland are experimenting with semaphores at their busiest crossings.



CONGESTION AT THE CORNER OF STATE AND MADISON
STREETS, CHICAGO.



HIGH PRESSURE FIRE FIGHTING IN NEW YORK.



widely separated as Indianapolis and Houston are rigid in their control of pedestrians.

A moving street crowd may be a mob or a procession.

SAFETY COMMISSION

The enormous increase in accidents in cities has led to the organization of the National Highways Protective Society and to local efforts at protection, illustrated especially by the Safety Commission of Chicago and Cook County. The figures from New York City show a steady increase in the number of people killed by motors, a decrease in the number killed by wagons and a fluctuating number killed by trolley. In 1913 motors killed 302, trolleys 108 and wagons 170. Those killed by motors or sufficiently injured to require medical attention in New York in 1913 were 1485. In about 20 per cent of these cases the owner was driving.¹ While motor fatalities are passing those from other vehicles except trolleys and are hot in pursuit of the trolley, they do not yet compare with firearm fatalities in Chicago. The motor fatalities increased from 52 in 1910 to 136 in 1913, but the firearm fatalities have risen steadily but less rapidly from 267 in 1910 to 328 in 1913.

It is easier to tell when a motor is loaded.

The ways in which people may be killed by vehicles indicate clearly how many of these accidents are preventable. Of the 1491 Chicago people run over or struck by street cars in 1912, 142 were fatally injured, but of the 1153 accidents in getting on or off street cars only eight were fatal. At the same time twenty-three pedestrians were caught between cars and ten of them were killed. It is evident that the traffic regulations now in force on the streets of Chicago must reduce considerably the number of needless accidents by enabling even old people or those with defective eye or hearing to know how to avoid cars and motors.

When it is considered that a very large percentage of the people do not know enough to walk to the right on the sidewalk, it is not surprising that they get into trouble on the street.

To educate a still untrained public and to introduce reasonable traffic measures, there has been organized the Safety Com-

¹ For Chicago figures see Appendix 5.

mission of Chicago and Cook County. The Safety Commission includes in its membership the mayor, the chief of the fire department, the superintendent of police, other officials of the city and county, clergymen, safety experts, engineers, judges, labor union officials, professional and business and newspaper men and women. Lecturers have spoken on safety to over 400,000 children in the schools. More than 1800 ministers and Sunday school superintendents talked about public protection on Safety Day. Corporation newspapers have freely given thousands of columns to the public safety movement.

New York City is putting green flash lights on its street corners by which policemen may be summoned on the call of the police station or the private citizen who pushes a button. At night the flashes, at four-second intervals, can be seen 2500 feet down all four thoroughfares. The flashes may be seen 700 feet in the daytime.

The Metropolitan Park police superintendent of Boston has introduced a signaling system on the Charles River. Along the most popular stretch of this seventeen-mile riverfront there extends a system of high poles, equipped with a red light on top and a telephone at the bottom. These are connected with a high tower and switchboard. In case of an accident, all the lights flash the code warning. There is an enormous patronage of the river summer and winter. The splendid life-saving equipment — including police trained for this special service, life lines, ladders, and 300 emergency boats — is made vastly more serviceable.

Safety First!

POLICE AND FIRE SCHOOLS

Cities have begun to conduct schools for the training of firemen and policemen so that their apprenticeship may not be served at too great an expense to the city. The New York Fire College seems to have set the standard. Fire captains have been sent from other cities to enjoy its benefits. The Bureau of Fire of the Philadelphia Department of Public Safety conducts a training school for probational hosemen and laddermen. Two buildings of different heights are used for laboratory practice, one of the buildings being equipped with office and classroom. Each form of fire apparatus is employed to familiarize the men

with its working. The men are chosen from the civil service list, assigned to the various companies, and required to attend the school for thirty days. Two instructors take men in squads of seven and not only familiarize them with all the different processes for extinguishing fires, but with the methods of saving people under all sorts of hypothetical situations.

The protective instinct is no more scientific than the maternal instinct.

The New York school not only trains policemen in detailed duties, but provides lectures on crime and guilt. In Philadelphia one man is taken from each station house—forty in all. They are excused from their regular duties for two weeks, while enjoying instruction in every branch of police duty, including first aid to the injured. Chicago requires double the length of time given in Philadelphia to this instruction.

The law and order school may pay better dividends to the citizens than the law school.

THE REGULATION OF ALCOHOL

The regulation of morals is commonly interpreted to mean the control of sensualism. Laws are passed regulating obscene pictures and plays, the conduct of people in public dance halls or any similar places of amusement, and the private relations of people so far as these seem to offend the accepted standards of morality. Whatever may be said about the desirability of individual liberty in the consumption of alcoholic beverages, it would be impossible in an American city to have absolute free trade. The Federal Government by its internal revenue laws controls to some extent the production of liquors, while the dispensing of them is subject to regulation by both state and city everywhere. The licensing of saloons is generally determined by state law, but many limitations are imposed by cities.

There is no scientific attempt to deal with intemperance anywhere in the United States.

Outside of prohibition states or communities, the chief methods of regulation are the limitation of the enticements of the saloon (such as restricting the patronage of women, the use of music or the provision of free lunches and gambling devices), the time when the saloon may be opened, and the number of

saloons. Sunday closing is now very generally observed. The closing of the saloon on election days is rigidly enforced, and in some communities the saloons are closed on holidays. The Massachusetts law limits the number of saloons to one per thousand in any community. Some cities, notably Worcester and Fall River, keep well within the limitation set by law. Cities where there is no such limitation run as high as San Francisco, that has five saloons per thousand inhabitants, and Milwaukee that has six.

The most rigid and successful limitation of the number of saloons is in Los Angeles, where the figure was set at two hundred in 1899, when the population was 102,479. With a population of 319,198 the number of saloons remains the same. By this limitation the exchange value of saloon sites is very high. The city has an invaluable power of limitation, since it is only on the basis of previous good behavior that a saloon site may be sold. The restrictions of Los Angeles are not all rational (tables and chairs have been removed from the saloons) and the city does not benefit by the increase in the value of the sites. Nevertheless, few cities hold such a leverage over the liquor trade.

Men in the liquor business have been more oblivious to the signs of the times than railroad directors.

It has been the practice of prohibitionists to annihilate the liquor business at will on the basis of a bare majority vote. This has undoubtedly encouraged the lawlessness of distillers and brewers. Some cities have made provision for compensating property holders and business interests when saloons are closed. Vallejo, California, has reduced the number of saloons from forty-six to twenty-five. The license fees have been trebled to create a fund from which to compensate the victims. Sacramento in 1913 passed a Saloon Compensation Ordinance. A saloon keeper there has received \$3000 as compensation from a fund contributed partly by the city and partly by the remaining saloonmen.

The saloon would not be classed with the brothel had it not been for the blindness of the liquor interests.

"THE SOCIAL EVIL"

Many cities have had thoroughgoing investigations into "the social evil" in recent years.¹ The chief consequence has been the organization of vice commissions, or more properly called in Chicago, and some other cities, morals commissions.² The perennial abolition of segregated vice continues without much damage to the social evil. Nevertheless, the situation has been distinctly clarified in many cities. Ogden and Youngstown claim to have cleaned out all houses of prostitution, but give no account of where the prostitutes have gone. Cities generally are coöoperating with the Federal Government in the pursuit of white slave traffickers and are introducing ordinances designed to regulate dance halls, skating rinks, motion-picture theaters, saloons, and other places that are likely feeders of sex immorality.

Great progress has been made since Americans learned the fallacy of the careless statement that people are not made good by legislation.

Many of the measures represent as blind groping as the Mann White Slave Law, but the Chicago Vice Commission, a large and notable body of citizens, made an exhaustive report that attracted national attention. It stirred many communities to emulation. Four years after the publication of this report the city council of Chicago authorized the Morals Commission. It had been necessary to overcome the opposition of the health, police and legal departments and the formidable organization known as the United Societies for Local Self-Government. This organization — a federation of over nine hundred organizations, including nearly one hundred and fifty women's societies — had directed its efforts largely to freedom of Sunday amusements and freedom in the sale of alcoholic beverages. When finally convinced that a larger liberty was to be gained by the latest statute creating a morals commission, their approval made an overwhelming public sentiment in Chicago. The commission is only advisory, but has started auspiciously, empowered to study sexual immorality in all forms and its causes, the rehabili-

¹ For a list of cities and two states which have had vice investigations and have made reports, see Appendix 6.

² For cities with standing morals commissions, see Appendix 7.

tation of its victims, and to promote action against disorderly houses not only in Chicago, but within three miles of the city limits.

The enemies of morality must observe the neutrality laws within the three-mile boundary.

The Red Light Injunction and Abatement Laws of Iowa and other states¹ lay the responsibility where it will be felt. A building devoted to prostitution or assignation may be declared a public nuisance. In such a case all the fixtures and furniture of the building may be sold and the house kept without occupant for a year. Abundant provision is made for the owner's and occupier's defense, but the income from the building is annihilated unless the abatement of the nuisance is guaranteed. The application of this law touches respectable people so closely that it has not yet become effective in large cities. It works well in Fargo, North Dakota.

The Declaration of Independence, with its protection of "life, liberty, and the pursuit of happiness" promises to survive the Constitution, with its protection of property.

¹ A list of the states in which Red Light Injunction statutes are now in effect appears in Appendix 8.

CHAPTER IX

JUSTICE AND CHARITY

MUNICIPAL COURTS

JUSTICE is frustrated not merely by the designing and powerful. The machinery of law in American cities is clumsy. As new conditions have arisen new courts have been created, until there is needless friction and expense. Chicago has blazed the way to coördination by the creation of municipal courts. These have not yet exclusive jurisdiction over the administration of law in Chicago but they are specialized under a common administration with a chief justice.

Chicago is dependent on popularly elected partisan judges and needless political clerks, but the system favors justice.

The successful specialization of the municipal courts enables each judge to give his attention to cases of a certain type, thus enormously increasing his efficiency. It also proves the necessity of reform of procedure in the courts. A husband refusing support to wife and children, but not abandoning them, must be tried in the County Court. The support of the wife cannot be enforced there, however, because this court only has jurisdiction over blood relatives. The municipal court, on the other hand, cannot enforce a clause under the Pauper Act because that is the province of the County Court. If the aggrieved wife goes to the Circuit or Superior Court she is told that relief can only come in the form of divorce. Thus the law encourages divorce merely to secure support. The Domestic Relations branch of the Municipal Court has been eminently successful in keeping people out of divorce courts, but it is grievously handicapped by the law. The increased power of the court under the adult probation act, enabling the adults to be treated as the Juvenile Court does children, increases the sphere of the court.

The court has a hard time getting justice out of the law.

One of the specialized courts growing out of the experience of the municipal court is the Speeders' Branch, which deals with the large number of infractions against the law by automobile owners. One of the most serious abuses stopped by this court has been the attempt to influence the judge. Few responsible people seem to appreciate the impropriety of this method which is not open to the ordinary lawbreaker.

The Chicago Municipal Courts, with an able chief justice and weekly meetings of the judges, begin to approximate justice.

Chicago is not alone in its municipal courts nor in its development of their peculiar functions. The Municipal Court of Cleveland includes a Conciliation Court, which follows the methods of Norway and Denmark. Cleveland has enjoyed the freedom of Chicago in developing its judicial methods so that it has not needed the Public Defender of Los Angeles. The chief justice selected a court clerk to present the cases of the needy. Twelve hundred such cases were settled out of court in the year 1912. The success of this method led to the formation of the Conciliation Branch. A writ is served by registered mail, which is the habitual practice of the Cleveland Municipal Court. Without the presence of lawyers, the litigants present cases involving less than \$50. The judge is usually successful in making the adjustment without a trial and without publicity. In a year and a half from March, 1913, the Conciliation Court had disposed of all but 200 of the 6184 cases filed. The fees ranged from twenty-five cents to forty-five cents. This practice has relieved the docket of the court, restricted the shyster lawyer, and given the people a friendlier attitude toward the administration of justice.

When writs are served by registered mail and justice costs no more than a parcel by post the public seems to be coming into its own.

JUVENILE COURTS

The herding of mischievous boys and careless girls among hardened criminals and the application of methods devised for adult lawbreakers have led to the demand for the segregation of juvenile offenders. The easy view of the innocent and the un-caught that all lawlessness is equally intolerable has delayed the appreciation of the necessity for discrimination. A probation

officer had been appointed in Boston in 1878. The hearing of children's cases apart from those of adults grew out of the experience with juvenile probation. This method was adopted in Massachusetts, New York, and Rhode Island before the creation of any juvenile court. In 1897 a Hull House resident succeeded in arousing a demand for a juvenile court.

It has taken a long time to reach what Ellen Key calls "The Age of the Child."

Like many other institutions evolving out of our common experience, the juvenile court originated in widely separated places about the same time. In 1899 Colorado provided a school law for the separate treatment of children, and Illinois enacted Harvey B. Hurd's law, entitled "An act to regulate the treatment and control of all dependent, neglected and delinquent children." The first separate court designed exclusively for the trial of children was established in Indianapolis in 1903, but for four years previous to this children had been tried separately in the established courts of Chicago and Denver. These two pioneer courts have differed in their development: the tendency in Chicago being toward differentiating young people and parents from younger children; in Denver to keep the cases under the same jurisdiction in the belief that it expedites justice. The same impulses that led to the organization of juvenile courts for separate trial demanded separate places of detention for children and young people.¹

The child has been given a presumption of innocence on account of its youth.

The New York County Children's Court is the largest of its kind, although it cares for a decreasing number of children. Its operations have revealed the fact that most children are arrested for trifling offenses. Seventy per cent of their misconduct is traceable to parental delinquency. It is claimed that more than half of the children appear in court as a result of their limited opportunity for play. The majority of the offenders are in their fourteenth and fifteenth years, at the beginning of adolescence, when the child needs opportunities not afforded by the city street. Still only 11 per cent of those released on probation fail to make good and have to be sent to institutions. Only one-fifth of all

¹ For the differentiation of Juvenile Courts see Appendix I.

the children arraigned go to institutions and at least half of them are suffering vicariously for their parents. The court is given large latitude in dealing with the child in New York, acting on the presumption that a child's chief need is proper guardianship. Only in rare cases is the child treated as a criminal.

The correction of the slum child must be directed not at the child but at the slum.

The Denver Juvenile Court was supplemented in 1903 by a law making it also a parental court. This was the law of Contributory Delinquency, holding "all persons responsible for encouraging or by neglect or otherwise contributing to delinquency of children." Whereas Chicago has differentiated children from youth and adults, the Denver Juvenile Court has had jurisdiction over all males under twenty-one and females under eighteen for all offenses. Denver has also been notable for the spirit of the juvenile court that has been able to trust practically all prisoners to go alone to the institutions to which they are consigned. In eight years only five out of 507 prisoners sent in that way have been lost.

The juvenile court has pointed the way to the family court.

While the child was separated from the criminal adult, the unsympathetic or curious spectator was admitted to the all too public hearings of the juvenile court. Judge, jury, probation officers, court clerks, stenographers, and privileged onlookers faced the child. During trial immediately behind the child stood parents or friends, prosecutor, and other persons connected with the case. In the background were the children and others involved, the next cases, and a group of casual spectators. Except at the discretion of the judge, the child's private life was bared to the public. If the child were very young or sensitive the judge might make a confidential investigation. Juvenile court experience has transformed this. Instead of the juvenile criminal standing before the menacing judge, we are coming to have the wayward child sitting in the presence of a foster-father.

The child has at last become the ward of the State.

Judge Ben Lindsey, the good genius of the children of Denver, in 1903 appointed as assistant to hear the girls' cases, Mrs. Ida L. Gregory, who had been connected with the juvenile court from its early days. When it seems preferable she has heard cases alone. Judge Pinckney of Chicago, feeling that it was outa-

geous to have the lives of young girls paraded before a curious public, proposed the appointment of a woman assistant to try these cases in absolute privacy and since 1913 Miss Mary M. Bartelme has conducted these cases in her own chambers with only those present who are directly interested.¹

A wayward child is treated as the victim of society.

THE JUVENILE COURT OF CHICAGO

The Chicago juvenile court has not only separated children from adults, but treats the delinquent child as the dependent child has long been treated. Until the establishment of this court a child was supposed to reach the age of criminal responsibility at ten. It seems like the first break of light into the dark ages to note that within the lifetime of the present generation a voluntary group of Chicago women first undertook to provide a teacher for boys — some of them as young as ten — who were awaiting trial or serving sentence. The juvenile court introduced the segregation of children in a separate court and a separate place of detention, together with a probation system that would treat the child preferably in its home. In the year previous to the establishment of this court over five hundred boys and girls were tried in the criminal court and committed to the county jail.

If a jail makes a criminal of an adult first offender what chance has a child?

A juvenile detention home was established to facilitate the work of the court. The improvised building and barn that served girls and boys respectively for the five years from 1902 has been supplanted now by the Juvenile Detention Home at 771 Gilpin Place. There is nothing like a jail about this home. The detention is compulsory, but the care is parental. The children enjoy medical attention, teaching, baths, and play. The teachers are supplied by the Board of Education. The experience growing out of the juvenile court, the juvenile detention home, and the probation system has led to a rapid differentiation and expansion of the court's functions. The age of juvenile delinquents has been raised and new courts established for older

¹ Appendix 2.

boys and girls. Two psychopathic institutes have been organized for children of different ages.

A mothers' pension law has been enacted making it vastly easier for mothers to keep their children at home. In two and a half years of experience with the mothers' pension law only one child out of the 1754 affected has become delinquent and only two have become truants.

The separation of boys and girls in the Chicago Juvenile Court has given Judge Mary M. Bartelme a rich experience in dealing with delinquent girls and has provided the girls with a confessional entirely unlike a court trial. One case is tried at a time. The judge is sympathetic, though keen. Her kindly interest does not prevent an exhaustive examination of the case. After the formal hearing, the judge usually has a confidential session with the "little girl," *sotto voce*. There is no court atmosphere. Simple pictures are on the walls. The inquisitive crowd is absent. Although the girls are given the option of appearing before the juvenile court judge or his woman assistant they always choose Miss Bartelme. Only as a last resort does the judge send the girl to an institution. She either returns home on probation or is placed in a family at domestic service. The girls remain on the list of the probation officer until they are eighteen years of age. In October, 1914, 169 girls were on probation in families other than their own. Eighty-one had bank books with accounts varying from \$1 to \$136.

The doors of the juvenile court usually open outwards.

COURT OF DOMESTIC RELATIONS

The notoriety of the divorce court belongs to a different age from the privacy of the Chicago Court of Domestic Relations. In 1913 fifty per cent of the divided families that appeared in this court were reunited. The purpose of the judge is to sustain marital relations. In less than one out of five cases does a lawyer appear. Nearly half of the cases are heard within one week after the complaint is made. Where a husband deserts his family, three times out of four he is summoned and an order for the payment of money made within two days. A deserting husband has only one alternative — a term in jail or a fine. If he fail to pay the latter he is on his way to jail within an hour.

The purpose of the court is to preserve domestic peace; where this is not possible punishment is speedy.

More than half of the cases in the Court of Domestic Relations are due to desertion. Seventy per cent of these were because of drunkenness, immorality, or venereal disease of the husband.¹ In 130 cases men had been arrested for contributing to the delinquency of girls. Most of these "men" were boys between fifteen and twenty involving girls from fourteen to seventeen. An incredibly small minority of these cases are attributed directly to economic causes. Offenses against woman and child labor laws are within the province of this court. One of the most significant factors of the municipal court in Chicago is that one judge sits continuously and gains experience in dealing with offenses against the domestic relations. He becomes a specialist.

Sex aberrations even when involving the welfare of the home are no longer lumped with burglary and murder.

The first year of the court there were fewer than three thousand cases. The third year there were more than four thousand. Lawlessness has not increased. On the contrary, wronged women and children without the means to employ legal talent seek the court in greater numbers. The first year \$19,000 was paid for non-support, the third year \$100,000. The unusual character of the court is evidenced by its including a crèche in its equipment, in which a Christmas tree was part of the furnishing last year. Two secretaries relieve the judge, hearing ten thousand complaints of quarreling couples a year. There is a court physician and a visiting nurse. Many domestic difficulties come from mental deficiency and venereal diseases. Married couples with the minds of children need pathological treatment. Husbands shown to be physically incapacitated find the maternal instinct supplanting belligerency in complaining wives.

A sympathetic court sitting twelve or fourteen hours a day becomes a refuge instead of a purgatory.

¹ Five hundred out of 3700 cases heard in the Chicago Court of Domestic Relations in 1913 originated in bastardy. One judge married 162 of these couples. Judge Bonniwell in Philadelphia assesses on the man the cost of confinement and the support of the child till fourteen years of age.

THE NEW YORK NIGHT COURT

The Night Court was established before the Chicago Morals Court and differs from the latter in its lack of privacy. It is a humane institution, however, in holding its sessions at night so that women offenders — especially in connection with the social evil — need not be unnecessarily confined over night. It was found that 40 per cent of those arrested were discharged after unjust confinement. There was a system of professional bailing that fleeced the girl of \$5 and involved the police in ways that indicated the exploitation of innocent girls. The first Night Court was established in August, 1907, and later differentiated so that men and women are now tried separately.

Woman is still tacitly regarded as the fountain of vice.

Soliciting, loitering, and tenement house prostitution are now confined to the women's Night Court. Fines have been removed and there is no longer any age limitation on the commitments to the state reformatory. In this way two of the greatest sources of the manufacture of criminals have been eliminated. The probation system enlightens the court so that women may have individual treatment where formerly they were so lumped together that it not only put a premium on the arrest of women, but speedily encouraged criminal habits. The first offender who desires to escape from the hell that yawns for her finds unsuspected paths opening out of this court. If she wants to hold those responsible who have led to her fall she finds the court staff ready to help her, but the court demands requisite evidence and the continued courage of the victim through the trial.

It begins to be admitted that a fallen woman may rise again.

The whole treatment of women offenders in New York City has been transformed in six years. The number of arrests has decreased two-thirds without any apparent increase in offenders. At the same time the percentage of convictions has increased from 63 to 87 per cent. More than two-thirds of those convicted were fined in 1907, but no fines are imposed to-day. Twice as many are put upon probation and the reformatory institutions are filled to capacity in the endeavor to provide a shelter and a place for recuperation and reform. Out of nearly 5500 women 3000 have been convicted but once, showing either

a remarkable exodus from New York or a change in the manner of living. Eleven per cent of the women have been arrested four times, representing a class that need permanent detention and correction. The related institutions are not yet adequate to the proper support of the Night Court, but the attitude toward the woman offender has been greatly changed.

They no longer abandon hope who enter here.

PSYCHOPATHIC INSTITUTES

The work of the juvenile court of Chicago was supplemented in 1909 by the appointment of Doctor William Healy to organize a juvenile psychopathic institute. The purpose of the institute is to examine defective children and aid the court in diagnosing their troubles and providing remedies. The institute tries to determine the mental age of the children as distinguished from the number of years they have been in the world. Out of five hundred delinquent boys and girls at the Detention Home less than 10 per cent were feeble minded. Environment was the chief cause of delinquency. An examination of repeatedly delinquent boys and girls shows that 10 per cent are feeble minded, 8 per cent mentally dull, due primarily to bad physical conditions, and 9 per cent poor in mental capacity. Seven per cent are epileptic. Only about half of the chronic delinquents could be said to have ordinary ability. An examination of the parents of these children reveals that in 31 per cent of the cases mother or father or both are more than moderate drinkers. In one-third of the cases there is a manifest physical defect. About 12 per cent are prematurely developed. Two-thirds of the homes of these children are demoralized by alcoholism, immorality, quarreling, desertion, poverty or a divided household.

Is there any cold comfort in thinking that the race is not always to the strong?

The reports of juvenile and similar courts have had a tendency to minimize economic conditions. When the boys' court was differentiated from the juvenile court a special psychopathic institute was established under the direction of Doctor William J. Hickson. These boys, between seventeen and twenty-one years of age, are subjected when necessary to the *Binet-Simon* and other tests. Of 245 boys averaging nineteen years of age

207 proved by this test to have an average mental age of twelve years. What chance has a full grown man with the mind of a young boy in the competitive life of a modern city?

It is not always poetic to be only children of a larger growth. Doctor Hickson's investigations are emphasizing the supreme importance of industrial influences. Neurologists are accustomed to speak of neuropaths (people having unstable nervous systems) and psychopatha (those having unstable mental systems). Doctor Hickson calls attention to the sociopatha — those economically and socially unfit. He says there is a critical economic or sociological period between the age of seventeen and twenty-one. "The records of our boys show that they fill only the simplest and humblest and poorest paid manual occupations; that they rarely hold a position more than a few weeks or months, and that the few that do are the first to be laid off when retrenchment or efficiency is brought into play."

The misused potentialities of city life are thrown into relief by the striking divergences between the Juvenile Court Psychopathic Institute and that connected with the Municipal Court. Abnormality cannot be so great as it appears in the cases of adolescent offenders. It requires patience and personal acquaintance to get facts from an adolescent youth. Economic as well as home conditions aggravate inherited qualities.

Doctor Healy says, "It practically always requires the effect of environmental influences to create a criminal out of even a mental defective."

The Municipal Court of Boston, as a result of legislation passed in 1913, enjoys the services of a trained alienist. He assists the judges in determining the causes of individual delinquency.

LOS ANGELES PUBLIC DEFENDER

"Every man is considered innocent until he is found guilty." No greater superstition blocks justice in our courts. In fact we employ a prosecuting attorney whose reputation hinges upon the number of his convictions. Every apprehended person is considered guilty until, in opposition to the legal machinery of the state, he is proved innocent. The poet Giovannitti and his comrades, Ettor and Caruso, were deprived of freedom for eight months to satisfy the demands of their enemies in Lawrence.

Because they had been arrested the state's attorney of Massachusetts used every strategy to prove their guilt. But the judge charged the jury so that acquittal was inevitable. The men were at last given their freedom without indemnification after great cost to their comrades, humiliation and suffering to themselves. Apart from justice to the victims, what economy to the state if these men had been presumed innocent instead of guilty! In Chicago Edith Abbott's report to the Merriam Crime Committee of the City Council showed that 3 per cent of all felony cases are sent to the penitentiary. The court and jail machinery, costing 8 million dollars a year, is maintained largely for those discharged as innocent or fined for trivial offenses.

It is poor economy to waste public money keeping innocent people in jail.

Los Angeles has led American municipalities¹ in introducing the Public Defender. It has been followed by Portland, Oregon. The latest charter of Los Angeles provides for an official to take the cases of those who have no adequate means to employ counsel. What lawyers and prosecuting attorneys would do if the profession of law were on an ethical instead of a business basis, the Defender is doing. Walter J. Wood, the Public Defender of Los Angeles, says: "Prosecuting attorneys are daily pitted against able lawyers employed by persons of means. . . . These prosecutors necessarily become wary, skillful in meeting legal trick with legal trick, vigorous in conduct of a case, resourceful in technicality. It would not be natural, were it possible, for them to change suddenly the habit thus formed when an indigent defendant appears."

It changes the atmosphere of the court when the prisoner finds a friend in the state.

Four lawyers and two assistants handle over a hundred cases a week with justice as their only goal. Poor defendants, who have had no means of presenting their cases and might be either without defense or the victims of shyster lawyers, find the court entirely impartial. The preponderance of influence of people of financial ability is removed. The cost to the state of keeping innocent persons in jail is relieved. The growing antagonism

¹ The state of Oklahoma had the pioneer public defender.

of the masses of the people to courts of justice may be neutralized. The mere existence of the Public Defender tends to the settlement of cases out of court, thus meeting the criticism of a distinguished jurist that courts are a necessary evil.

Equality before the law may become a reality.

COURT FINES BY INSTALLMENTS

The debtor's court is a hideous ghost of former days kept vivid for us by Dickens. Comfortable people who are not accustomed to paying fines for breaches of the law or who pay them without thought of being offenders may be shocked to know how far imprisonment for debt still prevails in the United States. The wealthy joy rider in Chicago pays his fine and goes his way, feeling that the experience is worth the price of admission. A poor man, arrested for some insignificant offense and unable to pay the fine, is usually committed to the House of Correction. Of nearly fifteen thousand Chicago commitments in the year 1913 twelve thousand or 82 per cent were imprisoned for the non-payment of fines. According to a bulletin of the Municipal Reference Library, if the city of Chicago had followed the superior methods of some other cities 74 per cent of the total number of men and women sent to the House of Correction might have been spared this mark of Cain. The payment of fines by installments instead of imprisonment enables an offender to continue to care for his family, does not penalize him for poverty, compels him to earn his fine by honest labor, directly increases the public revenues while saving the cost of maintaining prisoners, and gives the defendant the stiffening influence of the probation officer's aid.

“The law locks up the man or woman
Who steals the goose from off the common,
But lets the greater villain loose,
Who steals the common off the goose.”

The city court of Buffalo during the year 1913 placed on probation 759 prisoners on whom \$12,500 in fines had been imposed. Within the year nearly \$11,000 was collected and the rest not accounted loss. Not only did the city receive this amount in funds, but it saved over \$6000 that would have been spent in caring for

these offenders in the jail or workhouse. In addition to the public gains, the probationer benefits by the necessity of paying his fine in weekly installments. This makes an impression that generally precludes the repetition of the offense. In many cases it teaches offenders the value of money and they begin savings accounts when the fine has been paid.

Why support a man who might help support the city?

Indianapolis, in an experience of four years with collecting fines on the installment plan, has gathered in \$34,000 from 3800 offenders. Eighty-four per cent of this number paid their fines in full. In seventy-four cases the court withheld judgment because of the needs of the families of the defendants. Only sixty-nine failed to keep their agreement, involving re-arrest.

Two per cent of those permitted to pay their fines in installments in Kansas City have come back for second offenses as compared with 25 per cent of other kinds of repeaters.

The Juvenile Court of Cleveland has employed this method of disciplining the youthful gamblers. They are made to pay a small portion of the fine out of their own earnings each week, which makes gambling seem unprofitable. The punishment is much more impressive than when parents are allowed to pay the fine in lump. It permits also the opportunity of supervising the conduct of the youngster. Very rarely is a parole broken.

The cities of Massachusetts, New York, and Pennsylvania are also saving money by saving character.

CORRECTIONAL INSTITUTIONS

One of the difficulties in making the reorganized courts successful is the lack of institutions to which to commit people for minor offenses. The classification of prisoners and the reservation of penitentiaries for mature offenders make necessary some more humane and scientific method of treating the other prisoners. The average city jail and workhouse are no better than those described in the Topeka Improvement Survey. The capital city of Kansas has been bold enough to investigate itself and report frankly and comparatively on local conditions. The report brings out the need of farm work for prisoners and a liberal parole system.

The goal of paternalism is to get out from under.

The Board of Parole of the City of New York was organized in 1905. At the same time an institution for youthful offenders was located on Hart's Island, to be known as the New York City Reformatory for Misdemeanants. Males between the ages of sixteen and thirty, guilty of something less than a felony, were sent to this reformatory. The Board of Parole has as its chief function the regulation of prisoners paroled from this institution. In spite of paroling forty young men a month, the reformatory became badly overcrowded. The New Hampton Farms colony was established to relieve Hart's Island and the younger boys were transferred in March, 1914. The boys are chosen because of their trustworthiness and are put on honor. They have erected such buildings as were necessary, have plowed sixty acres of the farm, and planted over forty. These institutions are necessary as places of probation, but the three-years' commitment can be reduced to six months by good behavior. The purpose of the parole board is to parole young men as speedily as possible. By six months of good behavior under parole the young man may earn his discharge.

Freedom has to be earned to be enjoyed even by the law-abiding.

San Diego in 1912 organized a 7000-acre farm for delinquents. Duluth conducts a farm of 1000 acres, to which drunks and similar offenders are sent for ten to twenty days. The so-called farm is chiefly of second-growth timber which is being cleared by the prisoners. The men are not only working in the open air; the foremen are unarmed guards.

Cincinnati is engaged in humanizing its correctional institutions. Its Houses of Refuge for boys and girls are now located on farms. A farm of 390 acres was purchased in Glendale in 1913, and "Boyland" was established. Another farm of 135 acres in Wyoming, Ohio, was bought for the girls. The cottages and a schoolhouse are beautifully located overlooking the surrounding country, including nineteen acres of woodland that is a part of the farm itself. The girls are taught domestic occupations, but the inmates of the workhouse do the laundry work for these two houses and other public institutions. Thus the women are given occupation with the use of modern conveniences, and, at the same time, serve the community profitably.

Juvenile correctional institutions are usually located in the country.

THE COOLEY FARMS

Cleveland has gone beyond any other city in the concentration of its correctional institutions under one administration, while keeping them in the country. The Cooley Farms, a tract of 2000 acres, named in honor of Doctor Harris R. Cooley, Tom Johnson's original appointee to take charge of Cleveland's dependents and delinquents, houses the Colony Farm for almshouse inmates, the Correction Farm for vagrants, the Girls' and Boys' Farms, and the Overlook Farm for tuberculosis patients. The purpose of these farms is to afford a refuge where offenders may work out their own salvation, living in the open air and paying their own way.

Doctor Cooley has humanized the almshouse. The old couples, who were formerly segregated, are now allowed to live together on this big farm and work their own little garden patches. Over the door of the poorhouse is this inscription, "It is better to lose money than to lose love." The petty offenders, who are sent to the Correction Farm, have been so invigorated that they have organized a Brotherhood of Prisoners which finds employment for the released prisoners. They conduct a home and accomplish the difficult function of employment bureau for those who would otherwise be Ishmaels.

The Cooley Farms are moral sanatoriums.

SOCIALIZING CHARITY

The question is often seriously asked, "Does charity do more harm than good?" Certainly indiscriminate charity is both a means of making parasites and a sop to generous people, bribing them to suspend for the time their social responsibilities. Voluntary gifts may put the burdens of charity where they can most easily be borne, but caring for the poor by taxation develops the sense of social responsibility within the community.

The new era in public charity is marked by the assumption of an increasing number of functions by the public authorities that formerly were in private hands and the extension of welfare work beyond the former dreams of charity workers. City and county charities are still frequently chaotic, but in many communities a large amount of social work is done for those who are

not absolutely destitute and is done with the purpose of restoring people to effective citizenship.

The Public Welfare Department is no longer Pickwickian in all cities.

The Municipal Charities Commission of Los Angeles is designed to coördinate all private charities under public supervision. Except for the organization of a municipal employment bureau, its functions are distinctly charitable. It supervises the charities of the city, indorsing desirable ones, investigates the problems of poverty, and is authorized to administer funds for charitable purposes. To effect coöperation between the municipal body and private charities a Council of Social Agencies has been organized. It is governed by a board of eighteen trustees, one-sixth of whom are chosen by the Municipal Charities Commission.

Organized charity was an innovation to the last generation; it is now belated.

The Department of Charities and Correction of Cincinnati is an advance on the Los Angeles Municipal Charities Commission. Under the superintendency of Doctor Otto P. Geier there has been developed a threefold division of the administration of charitable effort: first, the supervision of the administration of public institutions; second, the supervision of social investigation and relief; third, the control of the medical bureau. The second department has developed elaborate functions. It has added to the conventional charitable labors a widows' pension, an agitation against loan sharks, the care of paroles from the workhouse, social and constructive service for the Municipal Court, and municipal surveys. The widows' pensions grew out of the desire to protect dependent from delinquent children. The demoralization of children in the House of Refuge has been relieved by helping the mothers to keep their homes. The Department of Charities and Correction has relieved Cincinnati of the need of surveys, such as other cities have enjoyed at the hands of private organizations. An exhaustive investigation was made of the conditions of living of the city's institutional population. This has been followed by a publicity campaign to arouse the citizens to a knowledge of their local conditions.

The municipality has mobilized the good Samaritans.

The Cleveland Department of Public Welfare has been or-

ganized under a new charter on a thoroughly scientific basis.¹ It has incorporated existing organizations and added new ones, but has an insufficient appropriation for adequate work. The Division of Health is continuing the services for which Cleveland is famous. The Division of Recreation conducted a municipal orchestra in 1914. The Division of Publicity and Research is trying to live up to its title. A lecture bureau is being conducted to instruct citizens of Cleveland regarding health, recreation, civics, charities and corrections, labor and immigration. The bureau attempts to reach the people also through exhibits and by newspaper publicity.

Public utility corporations have learned to advertise. Why should not municipal corporations?

DAYTON DEPARTMENT OF PUBLIC WELFARE

The city of Dayton has established a Department of Public Welfare under its city manager. In the new charter of January 1, 1914, the Department issues a statement of its functions, in which it says:

This charter was written by those who believe that human nature, under proper environment and with proper direction and encouragement is capable of far greater efficiency and service and happiness than has ever yet been attained in human experience. It is believed that it is the duty of a municipality to concern itself with the special problems of human life and community efficiency and betterment, just as well as with questions of safety, transportation facilities, good streets, etc. The result of such an effort on the part of a municipality, if honestly and efficiently made, cannot but be fruitful of much good to all the people of the city, both in respect to the raising of the standard of human efficiency, and the increase of community patriotism.

The Division of Health enforces the appropriate laws, gathers vital statistics, has established six clinics a week — three baby clinics, two tuberculosis clinics, and one general clinic, — supports a corps of nurses, and coöperates with all the other private organizations that supply nurses. The Division of Recreation administers the playgrounds in the parks and by co-operation with other organizations distributes playground facilities where needed. An Advisory Recreation Board has been

¹ See Appendix 3.

created, composed of fifteen representatives of the Department of Public Welfare, the Public Schools, and the Dayton Playgrounds and Gardens Association. In 1914 the public schools maintained eight playgrounds in their school yards; the city maintained six playgrounds; and the Playgrounds and Gardens Association twelve, each organization paying the supervisor of its playgrounds. The attendance for ten weeks was 200,000. The Division also provided two life-savers, one beach guard, and one swimming instructor at the bathing beach on Island Park. The other park functions are in charge of the Division of Parks.

The Division of Corrections has established a municipal lodging house for men and its equivalent in the "Door of Hope" for women. It has transformed the workhouse, eliminating contract labor and employing men on public works, including work on parks, levees, streets, municipal buildings, and workhouse gardens. The entire installation of the municipal lodging house was done by workhouse inmates. The food of the police station is prepared by them. It is self-supporting. There are also Divisions of Poor Relief and Municipal Employment. The Public Welfare Department has followed the example of Kansas City in organizing a Division of Legal Aid, which takes care of seventy-two cases a month. In 1914 of those aided 535 were white Americans, 96 negroes, and 93 foreign born.

A fund of \$1875 has been secured to make a survey of Dayton.

KANSAS CITY BOARD OF PUBLIC WELFARE

There has been organized in Kansas City, Missouri, under one general superintendent, Mr. L. A. Halbert, a Board of Public Welfare.¹ This board is one of the six administrative boards of the city, having equal standing with the Civil Service Board, Health Board, Park Board, Public Works Board, and Fire and Water Board. It consists of five members serving for three years each. The original members were appointed by the mayor, but

¹ The Kansas City Board of Public Welfare unites a child welfare department, factory inspection, free legal aid, loan agency, municipal farm, women's reformatories, recreation department (including social centers, dance supervision, motion-picture censorship, and recreation survey), employment agency, social service (which comprehends family and hospital visitation), and a research bureau. The last-named effects coöperation between the city and the private philanthropic organizations, including confidential reports on all the private charities.

the members nominate their successors. This self-perpetuating plan was designed to keep the board free from partisan politics and brought a great deal of pressure upon it in the first year because the politicians could not endure so independent an organization. When the appropriation proved to be insufficient, the employees of the board volunteered to accept a reduction of 25 per cent in their salaries during the last two and a half months of the year. The board wisely established the precedent of asking the Federated Charities to make nominations to vacancies. All the subordinates are chosen by civil service examinations.

Social welfare ranks in the same category with the protection of property from fire in Kansas City.

The Board of Public Welfare aims to overcome one of the greatest difficulties in the American form of government. All of our administrative agencies suffer by twilight zones. Public and private endeavor are not properly coördinated. One of the functions of the Board of Public Welfare is the indorsement of worthy charities, involving the education of the public to appreciate and to demand efficiency in charity administration.

The twilight zone between public and private recreation is also happily covered by the Board of Public Welfare. It is developing social centers in the schools in competition with commercial recreation. At the same time it censors motion-picture films and supervises private dance halls. Without obtrusive chaperonage certain regulations are enforced that automatically cut out the chief abuses of private dance halls. For example, managers are prohibited from permitting patrons to leave the hall and return or to bring bottles of liquor with them, to be shared with their friends in the toilet rooms. Thus there are virtually eliminated from the dance hall young women who come merely to meet men and make repeated visits for this purpose each evening. Girls under sixteen are not admitted unless accompanied by father, mother or guardian. The department sends representatives to homes that ignore this regulation, finally appealing to the juvenile court if necessary.

Legislation may not make human beings walk straight but it may hamstring the devil.

The first year of the operation of the Board of Public Welfare was spent in bringing together the various charitable and social agencies of the city and fighting unfriendly politicians. In the

second year great advances were made because of the successful correlation of activities that we have been accustomed to regard as quite unrelated. Over 4500 people who would have been helpless in the hands of careless or grasping landlords were secured better homes by the investigations of the housing inspectors. The factory inspection department of the board has confronted the employers of Kansas City with 693 orders, causing the work places of 40,000 men and women to be improved. Thirty-one thousand men who would have been a burden on private charity and a means of keeping industrial conditions unsettled were found jobs by the employment bureau. Three thousand families — not pecuniarily destitute, but lacking in the means of fellowship — have been served by the unique Social Service Department.

The representatives of the public have entered into human relations hitherto expressed by church or social settlement workers.

Two thousand prisoners in 1913 had their sentences curtailed and, under the friendly and stimulating influence of a parole system, have been given a chance to justify their freedom. Fifty thousand people satisfied their gregarious instinct by attending social center meetings promoted by the board. Five hundred thousand visited 2600 public dances under the chaperonage of the Board of Public Welfare inspectors. Twenty-five thousand daily attendants at the motion-picture theaters have been spared the vulgar and brutal films of earlier days. The Welfare Loan Agency has tided 1500 people over a period of temporary distress to economic stability.¹ The Legal Aid Bureau has put legal talent at the disposal of six thousand people who have been accustomed to regard the courts as beyond their reach.

The city becomes a big brother to a large family.

Whatever social benefits may be achieved, even public charity must bear the test of business standards. The municipal farm would justify its existence if it returned men to society more competent to maintain their economic independence. The farm did not stop here, but was so well managed that the prisoners in one year made improvements to the amount of \$2630 beyond the outlay. The women at the reformatory were able to sell

¹ In 1914 twelve thousand separate loans were made, amounting to \$200,000 as compared with \$140,000 the year before. The agency paid expenses and 6 per cent on the capital.

\$5000 worth of work. The prisoners under the supervision of the parole department, who would have remained a burden to the community if kept in prison, were set to work that enabled them to earn \$280,000. The board spent the modest sum of \$125 encouraging 167 gardens in vacant lots and the people's harvest from the soil was worth to them \$5000. A little over \$5000 was spent by the Employment Bureau in securing jobs that paid over \$34,000 for the first day's work of the applicants. When one begins to measure these trifling public expenditures in terms of social gain the dividends are incredible.

It is a twentieth-century achievement to make a Public Welfare Bureau pay.

THE WIDOWS' PENSION BUREAU OF SAN FRANCISCO

Widows' pensions are said to be paid now in thirty-two American cities of the first class.¹ The act authorizing the Widows' Pension Bureau in San Francisco was passed by the legislature in 1913. The funds are paid partly by the state and partly by the city. A widow who is endeavoring to maintain her half-orphan children under fourteen years of age in her own home may receive a pension to supplement her income so that she may have the equivalent of a living wage.² In case of desertion or when the husband is in a state penitentiary, the child may be declared a half-orphan by the Juvenile Court. The state undertakes to pay \$6.25 per month for each needy half-orphan under fourteen and the city supplements this amount to give the widow the necessary income. A family of three or less is supposed to need \$15 per capita. The widow must not have property valued at more than \$1000. An estimate is made of the income derived by the widow and other members of the family and this is supplemented to meet the estimated needs.

The family is the unit for the living wage in San Francisco.

The money is paid through the Associated Charities, the Catholic Humane Bureau and the Eureka Benevolent Society because these organizations had done similar work through the commitment of families to their care by the Juvenile Court before

¹ Appendix 4.

² In New York City the father must have been a citizen of the United States and a resident of the state at the time of his death.

the establishment of the Widows' Pension Bureau. On January 1, 1915, there were 775 names on file, over 300 of whom were receiving aid, involving 723 children under the age of fourteen. The expenses for the year were within the appropriation of \$107,000. The pension is conditioned upon the ability of the mother to take adequate care of the children. Otherwise, they are sent to institutions. The mother is not permitted to take men roomers or boarders, but must give her attention to the children.

The fatherless and the widows are visited in their affliction.

The pension enables the city to inspect conditions of living of needy widows through the aid of the social service visitor. The conditions of the neighborhood are recorded, the available church organizations, schools, playgrounds and clinics are noted, and the health of the mother and the children is observed. It is discovered that with the relief from the strain of poverty there is at once a nervous and physical improvement. In many cases recommendations have been made to increase the pensions; the family has thus been enabled to have a higher standard of living and a better house.

The widow's pension is not regarded as a charity, but as a contribution of the state to its most important social servant.

NEW YORK MUNICIPAL LODGING HOUSE

Every person without a roof in Greater New York is entitled to shelter at the Municipal Lodging House. The main building, a structure of six stories costing \$400,000, accommodates about one hundred women and one thousand men. The women's department is seldom filled. The demand on it is greater in the summer when the wives are deserted by their nomad husbands. Often husbands and wives are sheltered at the same time at the two departments, the children as usual being cared for with the mothers. There is no crèche, so only the hopelessly destitute mothers apply, remaining with their children until fitting work is offered.

It is one of our greatest social paradoxes that while women have homes more commonly than men do, all but the least attractive can find occupation in the street.

In each department the applicants who come at the rush hours

of early evening form in lines, get a check for their clothing, go to their respective departments and eat supper of soup, bread and tea. After the work involved is done, they go to the compulsory bath. Each one is given a clean nightgown, and their clothes are taken, with check attached, to be disinfected and returned in the morning. The men's clothes are hung on racks, but the women's are bundled into a net, from which they come forth in a very mussed condition. The lodgers all retire early, but not necessarily to sleep. There are babies in the women's department.

A doctor is on duty all night.

Each lodger is assigned a good canvas cot on an iron framework, with blankets, clean sheets and pillow cases, in a dormitory with a capacity of fifty women or two hundred men. The overflow from the men's department is cared for normally at the neighboring recreation pier, fitted up in 1913 to accommodate 1200 men. It is glassed in, warmed by twenty stoves and for sleeping purposes is as good as the lodging house. Although improvised, it is one of the economical ventures credited to modern municipal administration. The Department of Docks furnished this recreation pier at the foot of East Twenty-fourth Street, the Department of Charities inclosed it and equipped it with cots and blankets, the Fire Department heated it with stoves, the Police Department assigned special officers to protect the lodgers from theft and the Street Cleaning Department provided work collecting garbage and shoveling snow. On exceptional nights men are also taken to a more roughly improvised shelter in an old medical school building.

Most ten- and fifteen-cent lodging houses are hygienically inferior to the free New York Municipal Lodging House.

Each person is supposed to do a stint of work in return for supper, lodging and breakfast. The women do more or less superficial domestic work before they can leave the house. The men engage in a variety of occupations useful to the city. All the important functions of housekeeping, such as cooking, sewing, laundering, are done by men. The kitchen, laundry, and tailor shop are furnished with modern appliances. So far as possible, everything needed is made on the premises. After five hours of work in the house or on the street the men have qualified for two nights' lodgings, leaving the remaining day and a half free

to search for permanent work. The house is kept scrupulously clean and the inmates distinctly benefit by a few nights' retreat. Each lodger undergoes a medical examination, and in case of disease, is sent to the hospital. Doubtful cases are segregated.

If the down-and-outs scorn the Municipal Lodging House, there are still the Hotel de Gink and the subway.

Chicago, St. Louis and Boston conduct makeshift lodging houses, the best commendation of which is that they give better accommodations than the cells and floors of police stations.¹ Chicago is provided with 187 beds for men, and has frequently accommodated 4000 over night: two under each bed, heads out, and two between each two beds, with a bedless annex inlaid with them. Chicago appropriated \$100,000 for a new building in 1913. The cellar has been excavated. There is consequently a large opening for a municipal lodging house in Chicago.

Denver has rented eleven apartments of three rooms each to provide a temporary home for evicted and other homeless families. About half of the apartments are rented to provide revenue for taking care of the homeless.

MUNICIPAL EMPLOYMENT BUREAUS

There is no scientific provision for unemployment in the United States. The Federal Government has taken the first steps toward universal employment bureaus through post offices. Several states have for years conducted state employment agencies. Cities usually undertake to find work for the unemployed in time of industrial depression, when the task is most difficult and there are no adequate facilities at hand. The Chicago Lodging House in the winter of 1913-14 was able to offer its lodgers work for the city, cleaning bathing beaches, vacant lots, back yards, and basement areas. When the weather was not too inclement, the men were sent to the places where they were needed, having been given their lunch and street car tickets. At the end of the day's work the ward superintendent gave each man a ticket entitling him to another lodging. Many of the men were not only physically incapable of work, but insufficiently clad. There was no provision to clothe them. The following year the Preferential

¹ For other cities maintaining municipal lodging houses see Appendix 5.



NEW YORK CITY MUNICIPAL LODGING HOUSE.

Christmas dinner applicants — 3000 served.



MUNICIPAL LODGING HOUSE ANNEX, NEW YORK CITY.

24th Street Recreation Pier — 1100 beds.



Employment System was introduced. The Employment Bureau of the Department of Public Welfare investigated applicants and gave preferential cards to heads of families and residents of Chicago. Municipal and industrial employment was opened up by a flood of letters and spectacular publicity. The Mayor's Industrial Commission indorsed and aided the effort. One of the letters addressed to householders was headed:

DO IT NOW

Give a Job.

175,000 men out of work. Many suffering in a land of plenty. Think of some way to help. Think hard. Think now. For the honor of Chicago.

WE WILL

This work was supplemented by a Farm Employment Bureau, sending out 10,000 letters and advertising in the agricultural journals. City farming on vacant lands was also promoted.

The mayors of Philadelphia and New York appointed committees to spend the municipal appropriations for unemployment and destitution in the winter of 1914-15.

Many cities have expedited their public works in order to absorb the unemployed. In the very mild winter of 1913-14 Duluth tried to take care of its lumbermen by promoting municipal sewer jobs, and especially by the removal of a hill of rock that was an obstacle to street extension. Kansas City provides winter work at its municipal quarry, giving the preference to married men. Boston was favored by a gift of \$10,000 by an octogenarian citizen, Mr. G. A. Gardner. With this money the mayor hastened the work upon the new esplanade and strand-way of Marine Park. This gave employment not only to able-bodied men, who could handle a pick, but to the feeble, to whom the rake if not "the grasshopper is a burden." All were paid \$2.50 a day. Lynn decided to clear out the last vestiges of gypsy and browntail moths from its 2000-acre municipal forest. Two hundred men were employed by an appropriation of \$10,000. When this was exhausted a "buy-a-cord-of-wood" campaign was begun to touch private pockets.

The municipal woodyard of Independence, Kansas, enables that city to handle the timber in its city park. It cuts poles for

rural telephone lines, railway ties, fence posts and cordwood, paying the workers \$1.25 a day.

The rapid growth of Los Angeles caused the Municipal Charities Commission to establish a free employment bureau. This opened January, 1914, with a department for each sex. Two offices take care of the men and women at appropriate places. The endeavor is to furnish both temporary and permanent work, the former being provided until the latter is secured. Incompetents are sent to the United Charities. The applicants were divided into four groups: heads of families, employed where possible within the city limits at \$2.00 for an eight-hour day; unmarried unemployed American citizens, to whom three meals and lodging were furnished for four hours of work; aliens, chiefly Mexicans, discharged by the railroads; and the shiftless, who were turned over to the police department. Temporary arrangements were made during the winter months in two camps, established in a city park, a separate camp being maintained for Mexicans because of the great difference in diet. Park work thus took care of nearly three hundred and fifty Mexicans and over eight hundred whites. The process of elimination pursued in Los Angeles has almost reached the standard that "he who will not work, neither shall he eat."

Nineteen cities had established municipal employment agencies in 1914.

Many cities put restrictions upon public employment in the endeavor to discriminate in favor of residents or citizens. The city of Oakland, California, forbids the employment of any workmen except those residing in the city of Oakland, or the use of any materials except those produced or manufactured in the state of California, if such are obtainable. Milwaukee provides that the city laborers shall not only be citizens of the United States, but residents of Milwaukee for three years. Public sentiment in New York City was aroused in 1915 in support of the law to exclude aliens from public works.

A city may protect itself against the influx of non-residents. It is the function of the nation to regulate alien labor.

The inadequacy of private employment bureaus or their unscrupulous methods have compelled the organization of state free employment agencies. Illinois and Massachusetts have led in the organization of employment offices. The first state em-

ployment agency in Chicago was organized in 1899. They are no nearer grappling with the problem of unemployment than when originally organized. The Boston office of the Massachusetts free employment system finds jobs for about twenty thousand applicants a year, ranging from a scrub woman to a foundry superintendent.

The out-of-work is no longer confused with the "down-and-out"!

The city of Superior established a municipal employment office in 1899. A commission of three members, one from the city council, one from the trades and labor assembly, and one from the commercial club, opened an office in the City Hall. The business was conducted by the clerk of the Board of Public Works. This office was turned over to the state when the latter organized its system in 1901. Agencies were also opened in Milwaukee, Oshkosh and La Crosse. The Industrial Commission assumed charge of these in 1911. The cities provide office space, heat, light, telephone and janitor service. The Industrial Commission pays all the administrative expenses.¹ These offices secured over twenty-five thousand positions in 1913-14, about one-third of which were short jobs. The cost per position secured in 1913 was forty-three cents. The state paid twenty-seven cents of this, and the city and county sixteen cents (the city paying three-fifths and the county two-fifths). The fact that there were twice as many applications for work and nearly twice as many for help as there were positions filled would indicate the need of a vocational bureau to coöperate with the employment bureau. A monthly labor market bulletin is issued, indicating the supply and demand, whether the occupations are skilled or unskilled, temporary or permanent. These reports have, unfortunately, not yet made their way into the newspapers alongside of the stock reports.

It is absurd that stocks and bonds should be reported daily and jobs decennially.

The Division of Employment of the Cleveland Department of Public Welfare not only tries to deal with unemployment, but includes a Vocational Guidance Bureau and a city Immigration

¹ The agreement between the Industrial Commission of Wisconsin, the Common Council of the city of Milwaukee and the Board of Supervisors of the County of Milwaukee appears in Appendix 6.

Bureau. An attempt is made to discover the special talents of minors. The division also tries to assist immigrants in reaching their destination and to assist them to prepare themselves for naturalization by coöperation with the public night schools. "Citizenship receptions" are held at the time of the awarding of naturalization papers.

No sounder basis of citizenship could be laid than the guarantee that every citizen could honorably pay his way. This is the demand of Public Welfare.

CHAPTER X

INDOOR EDUCATION

MODERN methods of education are bringing about a closer relation between the home, the school and industry. The progressive public school is to be found in many cities of the country, but the best commentary on contemporary education is that standards still fall short of those accepted by the leading modern teachers. The ideal school will have classes small enough to permit of individual instruction, yet large enough to be democratic; will adapt the work of the earlier years to the natural experiences of the child gained before entering the school, and the work of the later years toward fitting him for occupation and for citizenship. Our public school system fails at the beginning by having too few teachers and too large classes, and at the end by leaving a gap between the school and occupation. Hopeful exceptions are, in the first instance, the better kindergartens and grades where the kindergarten methods have persisted; in the second instance, the vocational schools of to-day, which are successful in preparing pupils for occupations.

The problem of the pedagog and of the school board is to make both ends meet.

KINDERGARTENS

One of the first departures from the Gradgrind type of school, satirized by Dickens in "Hard Times," was the kindergarten. It began to leaven the American school system over half a century ago when Miss Elizabeth Peabody introduced it into Boston. For a quarter of a century voluntary organizations experimented with the kindergarten in eastern cities. In 1887 the kindergarten became a part of the public school system of the city of Philadelphia. The system has been extended in Boston until the one public kindergarten of 1888 has grown to 124 in 1914.

Lexington, Kentucky, followed up its pioneer work in public

kindergartens by introducing the Montessori plan. It is used now to make the adjustment between the kindergarten and the first primary grade. The Montessori method has been employed in the Andrews School in the South End of Boston under a teacher prepared by Madame Montessori. The children, three and four years of age, not only engage in housekeeping, but are said to learn to read in six weeks.

Every city child needs the chance to learn through his finger tips.

The testimony of the first-grade teachers in New Haven, after twenty years' experience in public kindergartens, is that the children coming from the kindergarten have more initiative and a larger background of experience than other children. The social instinct is conspicuously developed in the children from the foreign districts. Pittsburgh educators claim that kindergarten children pass through the elementary schools half a year before other children.

In Richmond, Virginia, there is an intermediate grade between the kindergarten and the primary grade. Kalamazoo is one of the cities making the connection by planning the primary rooms after the fashion of the kindergarten with similar tables and chairs and the kindergarten circle for the social periods. The work is facilitated by selecting primary teachers who have had kindergarten training. Milwaukee and Rochester have a kindergarten in each of their public schools. Pasadena houses its kindergartens in bungalows, but maintains their organic relation with the public schools by locating each bungalow in the corner of a school campus. The children of the Pittsburgh kindergartens make visits to markets, stores, and other places of interest. The kindergartner visits the children. It is required that from each kindergarten at least 150 visits shall be made annually to the homes. Eighteen thousand visits were thus made in 1913. The chief weakness of the kindergarten seems to be in its having been regarded as a separate institution, but it is now being made an integral part of the school system.

The kindergarten has rewarded its friends by permeating the elementary curriculum with the spirit of freedom.

THE ELEMENTARY GRADES

The kindergarten is a symbol of the great pedagogical principle, "a little child shall lead them," that is responsible for the complete overturning of the school system imposed upon American cities by the colleges with their entrance examination standards. The number of children in attendance to-day and the gigantic expense involved have caused American educators to see that education must serve those whom the public schools reach and not be designed for the insignificant collegiate minority. Twelve hundred American cities have eighteen million children enrolled in their schools.

The clumsy, mechanical, expensive methods of former days will no longer do.

A number of American cities are grading their schools by superior methods. Instead of having all the children ten years of age pursue the same subjects every day, some unable to keep up, some marking time daily and wasting two or three months in the year, systems of promotion or election now enable children to go through the schools on merit. For twenty years Cambridge has permitted children to pass through the grammar schools in four, five or six years, according to their ability. In Pueblo, Colorado, the individual child is advanced without reference to the other children. North Denver provides that the cleverer children may do more intensive and individual work while the other members of the class are being held to the routine course. Fresno, California, regroups the children monthly, allowing the slow, medium and alert children to advance as they are able.

The public schools begin to educate the individual child, instead of the hypothetical "average child."

MANUAL TRAINING

Experiments in promotion, coupled with the introduction of manual training, have led to the reorganization of the school life of the children in many cities. Manual training is now so thoroughly accepted in American public schools that only backward cities omit it. It has permeated the school system, as has the kindergarten, so that the recognition that the whole child goes

to school is almost universal. Manual training was originally one of the "fads," opposed by unlettered business men and unthinking editors. Manual training is recognized now as being quite as indispensable for mental training as for trade education. The greater progress made in the first six grades, if the child's mind is relieved by bodily activities, and the necessity of keeping the children longer in school to fit them for occupation are leading to a new division between elementary and secondary education.

So far from neglecting the three R's, it is found possible to teach them adequately in six years instead of eight.

The opposition to the so-called "fads" or "frills"—nature study, music, drawing, industrial and household arts—has been justified in part by their being superadded to a fixed system of education. When they become organic and the old literary subjects are made incidental to those things from which the child gathers experience, the work becomes more thorough. It manifestly requires more hours a day to give a conventional literary training and at the same time require a child to do the things that once occupied all his waking hours. The lengthened school day, however, is a relief, instead of a tax, when the subjects are diversified and all the faculties, instead of merely the mind, are occupied.

The Cincinnati schools represent the rapidity of the recent transformation of the school system. There are forty-three elements in the curriculum, thirty-two of which were non-existent in 1904.¹

DOMESTIC SCIENCE

Manual training for girls logically takes the form of the domestic sciences, not because girls are to be restricted to these subjects, but because such instruction grows out of their home experience and is likely to be a necessity of life. In Chicago 202 out of 276 elementary public schools have their own domestic science equipment, as well as 18 high schools out of 19. Sewing is begun in the fourth and fifth grades and domestic science is taught three hours a week for half of the year in the sixth, seventh and eighth grades. This work now culminates in the Lucy

¹ See Appendix 1.

Flower Technical High School, where domestic art is happily united to domestic science. The art department and the sewing department coöperate in dressmaking. The lunches are prepared by the domestic science students. There is a laundry at the school, in which the girls not only learn scientific laundering, but the nature of the materials in common use. Washing all kinds of fabrics, bleaching, removing stains and ironing are all treated from the standpoint of science and economy.

Domestic science work must stand the test by actual use.

Los Angeles, at the Castelar Street School, has a domestic science building for the elementary grades. It is used by the regular elementary classes and by the after-school classes. Cooking, sewing, housekeeping, nursing, sanitation, the selection and purchase of foods and the preparation and serving of the school lunches are included in the curriculum. Few school systems now lack domestic science, but until the curriculum is completely reorganized, it must be denied many girls and too little will be given to those who do receive instruction. Only 43,500 of the 388,000 girls in New York City could take advantage of the admirable domestic science equipment in 1912. One hundred and seventy of the 560 elementary schools are equipped for cooking, which is provided for the seventh- and eighth-grade girls. Twenty thousand left school before reaching the seventh grade! New York, however, has been a pioneer in a device that is now employed elsewhere, the establishment of a housekeeping center. A model flat was started in New York in 1902 for experimental housekeeping.

In the city where two-thirds of the schools give no domestic training an organization of influential women can find no more positive way to preserve the home than opposing the vote.

ART

It is not a very long step from the appreciation of dexterity to the desire for creation. The art influence of the schools takes the form of art instruction and of the beauty of school buildings. William Bently Fowle, headmaster of a Boston public school, in 1812 introduced drawing as a required study. In 1827 the English High School adopted it, but not until 1853 was there a special teacher. Philadelphia appointed Rembrandt

Peale, one of its own artists, to supervise drawing in the schools in 1842. Art instruction in the schools has advanced remarkably in the last two decades. In Massachusetts (as in New York) there is state supervision of art instruction which tends to extend the good influences of Boston and other progressive cities over the whole state. The art instruction in the Massachusetts schools is carried on throughout the entire system from the State Normal Art School down to the lowest grade.

Every child has the instinct of beauty until the sordidness of life crushes it.

In New York City previous to 1897 drawing was taught by the class teachers without assistance. In that year Dr. James P. Haney, supervisor of manual training, had added to his functions the supervision of art education, which required not simply the teaching of the children but of the classroom teachers. Art teachers in the New York schools are selected from eligible lists made up by the director of drawing. The positions are widely advertised in the press and in normal and high schools throughout the country. The training of the teachers selected continues during the school year. The director holds local and central conferences monthly and teachers visit each other's schools. Thirty of the best teachers assisted in giving the instruction in 1914, using the productions of a hundred of the city teachers as illustrative material. The pupils enjoy the benefits not only of the superior methods of pedagogy, but lectures and exhibitions promoted by the School Art League.

The art treasures of the city are thus made intelligible to thousands of pupils.

The present tendency in Chicago is to make art an organic part of education. The first purpose with children above the kindergarten is to train eye and hand together. This is done in the first grade by paper folding and tearing, in the second by making paper furniture and boxes, in the third by making raffia mats and bags, in the fourth by constructing reed baskets, in the fifth by sewing and scroll sawing. As early as possible design is introduced to bring out the child's individuality. This is not confined to work in the art department, but is applicable to the arrangement of themes and examination papers of all kinds. The more progressive teachers are using drawing to visualize history, geography, and nature study.

Higher up, drawing is correlated with manual training and the household arts. The child having begun with decoration goes on to constructive designing.

It was discovered in Chicago that 50 per cent of the children could reproduce objects in black and white; 99 per cent in color.

The possibilities of local color are admirably illustrated in the adaptation of the art instruction of San Francisco to the Oriental children in that city. It was found that the Chinese child did not respond readily to "Red Riding Hood," "Pied Piper of Hamelin," and "Pocahontas." They were encouraged to try themes suggested by the life they knew. Their success in representing such subjects as a Chinese pageant, a play at a Chinese theater, a tea party, and a joss house, often including the Occidental background, is so great that San Francisco is pointing the way to the desirability of letting the children express in drawing the actual experiences of their lives.

The function of art education is to enable each child to produce what no other child can.

MUSIC

Music is taught not only through choruses in the Cincinnati elementary schools, but by orchestras, which have been eminently successful in the high schools and are being extended to the elementary schools. Pupils are encouraged in their work by frequent contributions to teachers' and parents' meetings and other community gatherings. The community choruses are largely made up of high school graduates. The schools participate in the Cincinnati music festivals.

The music department of Minneapolis includes a supervisor, four assistants, a high school theory teacher, and five organ teachers. Music is a daily feature of both grade and high school curricula. Each pupil sings alone as well as in chorus, just as he recites individually. The rivalry among the pupils for membership in the choruses is a spur to the work. Every high school pupil is required to attend the chorus two periods weekly. For four years' work the pupil receives two credits. The same credit is given for one year's work in piano, voice, organ or service in the orchestra. The choruses not only sing in the schools, but give free open air concerts in the parks, inviting the audiences

to join in the familiar songs. There are sometimes as many as 15,000 auditors.

Democracy cannot become articulate until the people can sing.

Mr. Will Earhart, upon becoming director of music in Pittsburgh, promptly revolutionized the methods of that city. The work in the grades was so successful that a recital of children's songs was given in the Exposition Music Hall in June, 1913. The combined high school orchestras furnished the accompaniment and about 1200 pupils — 150 from each of the eight grades — took part. The municipal Christmas Tree called forth a chorus of 2200 children. The Department of Music has investigated the musical conditions of Pittsburgh school children and found that outside of the school over 7000 students are taking music lessons — more than one in ten of the pupils in the day schools. It is expected that this work will be accepted for graduation. Mr. Earhart has pursued his investigations in other cities and found that twenty-four high school systems out of 600 reported crediting pupils for piano, organ, voice, violin, and other orchestral instruments.

The best developments of music in the schools are community choruses and the teaching of musical appreciation.

CIVICS

There is rivalry between Newark, New Jersey, and Chicago for the leading position in the teaching of civics. Mr. J. Wilmer Kennedy, Assistant Superintendent of the Public Schools of Newark, published in 1892 a "Course of Study on the City of Newark" to be used in all classes from the first to the eighth grades.¹

At the Lewis-Champlin school, Chicago, the principal, Miss Kate S. Kellogg,² devised a curriculum for each grade, which enables the children to develop many of their subjects of study from some well-known city experience. In the primary grades, the active interest of the children in the fire department was made the basis of their constructive work, giving "an easy channel for the free use of oral and written language" and lending itself "naturally to the interests of games and dramatization." The

¹ See p. 245.

² Miss Kellogg has since become a District Supervisor.

finances of the fire department were made the basis of arithmetic. Visits to the engine house and the Columbian Museum gave them a knowledge of invention and construction and the interdependent social life of to-day, as contrasted with the past. The large number of fires in the tenement districts introduced questions of space, air, light and social relations.

The sixth grade followed the methods of the contractors in paving and building, and gave practical expression to their investigations in requesting improvements in the school grounds, based on their own specifications. The seventh grade developed from their drawing lesson a comprehension of the smoke nuisance, which led them to an examination of the revised code of Chicago and the great field of problems therein involved. This resulted in special attention being given to the disposition of the city's wastes, and an individual proposal from each child of a method of solution. The eighth grade followed this subject into the intricacies of sewerage and drainage, studying the history of Chicago and its most recent accomplishments. The mechanical genius of the boys found expression in the construction of bridges, locks, boats, and all appurtenances of the drainage canal. This subject was not left without a considerable survey of the governmental questions involved.

Citizenship is life. Why try to learn it from a book?

The Civics Extension Committee is now encouraging other teachers and principals to employ the same method.¹ A text-book, "Wacker's Manual," based upon the "Chicago Plan," drawn up by Messrs. Burnham and Bennett at the expense of the Commercial Club, has been written by Walter D. Moody. It would give children a magnificent ideal of their function in the development of the city if teachers could be found to use it. The plan is so elaborate and prophetic that it taxes the imagination of the average teacher. Nevertheless, the Civics Extension Committee sends out package libraries for the use of teachers and pupils and the Public Library offers to duplicate the material it has in its Civics Room. A health exhibit held at the Carter H. Harrison Technical School drew an attendance of over 30,000 in ten days (there are two thousand day and two thousand night pupils in this school). Forty boys and girls made a graphic

¹ Appendix 2.

health study of the neighborhood, calling on the City Club and the Health Department of the Civics Extension Committee for help. Evening entertainments supplemented by a high school orchestra and the girls' glee club appealed to the different nationalities in the neighborhood for their selections. The students also acted as guides to the exhibition.

In Winston-Salem, North Carolina, there are three methods of training for citizenship: (1) coöperation between the public schools and the Board of Trade, (2) the department of government and economics in the high school, (3) the "juvenile club" or boys' department of the Board of Trade. An industrial survey has been made by the juvenile club under the direction of the secretary of the Board of Trade.

Many schools use the daily press in their civics classes. Public libraries coöperate, as the library at Houghton, Michigan. High school seniors gather there and clip the exchanges of the local paper. They have been instructed to look for political, economic, or social data, especially pertaining to their state. These have been classified and used not only in the civics and history classes, but by the English department. The envelope including proposed legislation in Michigan, for example, contains clippings on such subjects as fraternal insurance societies, local option, primary elections, the recall, teachers' pensions, saloons, education, prison legislation, "blue sky" laws, and private banks. The class pursues these subjects by getting state and national documents to supplement the clippings. They thus have access to a text-book that in volume and immediate pertinence could not be issued by any publisher. The Lane Technical High School, Chicago, issues its own daily paper for free distribution among its 2000 students and faculty. The boys get training not only in English, but in every mechanical detail of the newspaper office, even to making type.

Kansas City, Kansas, uses the chemistry course in the high school for the teaching of practical civics. Water and milk analyses are made and high school students serve in the municipal laboratories. At Gary the pupils test all of the food and materials used in the schools.

Self-government in elementary schools has been tried in many places with varying success. It is achieved in part by the proper organization of classes. Self-governing teachers usually have

self-governing classes. Philadelphia and New York have experimented with the School Republic, a system of government devised by Wilson L. Gill. A League of School States was organized in 1913 by the officers of self-governing schools in Manhattan and Brooklyn. Meetings were held for the promotion of the movement, culminating in a June picnic. The model of parliamentary government has proved too complex for most elementary schools.¹

MORAL TRAINING

Moral training has been unfortunately confused with instruction in the Hebrew and Christian Scriptures. The problem was a simple one when the Puritans predominated in the colonies. With the advent of people of other faiths, the Protestant Bible ceased to be the authority. Literalists, however, have clamored for the retention of the Bible in the schools, believing that its perfunctory reading is better than its absence. Any proposal for moral training is met by such people with the objection that it is irreligious or agnostic. The result is parochial schools conducted by Roman Catholics and Lutherans, who insist on the supreme importance of religious instruction, and public schools where even the Bible must be taboo. It is considered a triumph in New York City that the charter requires Bible reading regardless of the sacrilegious way in which an indifferent teacher may read it to preoccupied children.

Ingenious people have not only made bricks without straw, but without clay.

In contrast with this method is that defended by Superintendent J. H. Phillips of the Birmingham, Alabama, schools, who says :

The teachers feel as free to use the Bible daily in the schools as any other good book; as a matter of fact it is used daily in our high schools and in the higher grades of our elementary schools. There has never been any attempt to legislate the Bible into the schools; such action is unnecessary; it would simply invite further legislation to put it out.

The reading of the Bible and the repetition of the Lord's Prayer are forbidden in Louisiana by decision of the Superior Court.

¹ For self-government in secondary schools see pp. 212-214.

The state of North Dakota is providing that its cities shall be able to use the Bible in the curriculum of the high schools without the imputation of a religious exercise and by a method which at least commands attention. The Bible is treated as literature and history. The state issues a Syllabus for Bible Study, outlining the geography of Bible lands, the history of the Hebrews, the life of Jesus, and the early history of the Christian Church. The work is done at home so that parents and church teachers may direct the study if they choose. The state prescribes no reference books and the study is elective. This may point the way to a solution of the relation of the Bible to the public school, but it certainly does not provide moral training for the student body either with or without the Bible.

The Gary school children are credited an hour or two a week spent in their respective churches in voluntary biblical study under their accepted spiritual advisers.

The State Superintendent of Public Instruction of Pennsylvania, rejoicing in the law passed recently by that state, requiring the Bible to be read in the public schools and that a teacher could be discharged for refusing to read ten verses a day, naively admitted that the Bible did not teach the boy to brush his teeth or avoid cigarettes. Grand Rapids is endeavoring to meet the problem of moral training through its vocational guidance. Themes are given in the study of English that will induce thinking on moral responsibilities. The public library is coöperating in furnishing material for these themes. This experiment suggests that all good workmanship under an inspiring teacher is moral discipline and may even savor of religious inspiration.

Pupils may be brought into harmony with Nature, with man, and with God without a word of theological instruction.

HYGIENIC TEACHING

The teaching of hygiene is still a subject of controversy, as is religious education, but there is no longer dispute about the value of physical training. Almost every new high school includes a gymnasium and playground, and most of the elementary grades have some form of physical culture. The best schools endeavor to guide the athletic exercises of the children through-

out the course.¹ New York City is experimenting successfully in extensive athletics, tempting at least the boys to participate instead of being merely rooters. Class competitions are arranged, by which four-fifths of the boys in a class are encouraged to compete in order to raise the class athletic record. Eight thousand boys in the grammar grades enter the running races. The schools have their own athletic meets. The girls engage in folk dancing. Nine hundred and forty-one teachers have organized 269 groups of girls for long walks.

In lieu of the old pathological teaching about alcoholism and tobacco the child is positively taught the care of his body.

The boys in the New Trier Township High School at Kenilworth, Illinois, meet for forty-five minutes after the school session for gymnastic exercises. They all progress from one piece of apparatus to another until they are ready to take part in handicap games. After the use of the gymnasium, swimming is permitted. In this way almost every boy is interested in some phase of athletics. Supplementing the athletic work, New York offers thirty evening lectures on First Aid to the Injured, in addition to half as many on general hygiene. The 12,000 pupils in the evening schools of Buffalo were thus instructed in the preventable ailments.

The average citizen needs hardly anything so much as team play.

Birmingham, Alabama,² conducts a brief course on sex hygiene for mothers, delivered at five school centers in the middle of the afternoon. At most of the schools a temporary nursery is fitted up by the older pupils, who are thus given incidental training in the care of babies. The Cleveland plan is to invite men and women to the schools in the evening, a woman physician presenting the subject to mothers, and a man speaking to the fathers. This has met with a large response. One of the smaller cities that has introduced sex hygiene is Parkersburg, West Virginia. The subject is begun by a study of reproduction in the lower orders of plant and animal life. Instruction is given not only by teachers, but by physicians, a woman for the girls and a man for the boys. These talks are very intimate and direct.

Decency and frankness are antidotes for lewdness and obscenity.

¹ See Appendix 3.

² See Appendix 4.

An elaborate system of sex hygiene was introduced in Chicago on the recommendation of the Vice Commission in 1911. Lectures were given in twenty centers, the mothers coming in the afternoon and the fathers in the evening. This was followed by a brief course on the subject of personal purity in each of the twenty-one high schools and the normal college. The classes were segregated and all excused whose parents objected. Twenty-one thousand and five hundred pupils attended the lectures in November, 1913, one per cent of the membership being excused. It was so successful that the Superintendent was instructed to prepare a plan for extending the work into the elementary grades.

The opposition of childless custodians of morality caused the work to be abandoned in January, 1914.

EXCEPTIONAL CHILDREN

As the new system of grading in the elementary schools, the junior high school, and the all-year school make opportunities for the supernormal child, so modifications are being introduced to care for the subnormal child. The first city to establish classes for deficient pupils seems to have been Cleveland, influenced by an address delivered by August Schenck in 1878. Subnormal children were put in a separate room in Chicago in 1892; there were over fifty such rooms in Chicago in 1914. Providence in 1893 organized six classes in an endeavor to make a comprehensive provision for truants and disorderly children; a separate class for backward children followed in 1896. In spite of the extent of child study at the end of the nineteenth century, it was not until the dawn of the twentieth that a scientific endeavor was made to examine the individual child by a trained psychologist. Dr. Walter Scott Christopher secured the establishment of the Department of Child Study and Pedagogic Investigation in the Chicago schools in 1899.

Cities as remote as Hartford, Connecticut, and Salt Lake City, Springfield, Massachusetts, and Los Angeles have scientific clinics or laboratories.

In the care of deficient children Baltimore provides two classes for epileptics, who attend in the forenoon, street car tickets being provided for those that need them. Chicago has two schools for

crippled children to which they are transported free in ten busses. The Spalding School on the West Side is entirely for cripples. Five teachers care for one hundred children in the winter. There is also a summer school. New York segregated six hundred crippled children in 1913. Cincinnati separates its mentally defective children and the deaf, but carries on the instruction of the blind so as to give them as much association with normal children as possible. Grand Rapids provides for its retarded pupils in special classes and has an additional school for the mentally defective¹ with twelve pupils in each of the four rooms.

New Jersey appropriates \$500 for each teacher having charge of a special class. This enables Atlantic City to draw its six teachers from Vineland and neighboring institutions.

The problem of retarded children assumes almost incredible proportions in a city like New York, where 21 per cent out of 580,000 elementary school children were backward in 1912. Los Angeles has evolved an elaborate system for the classification and care of its special pupils. This includes (1) ungraded rooms for all backward children, (2) special ungraded rooms for truants and incorrigibles, (3) segregation of the newly arrived immigrants, (4) a detention house for coöperation with the juvenile court, (5) classes for the deaf and dumb, and (6) a day nursery housed by the school department, but administered by the parent-teacher association. Three hundred cities and towns made special provision for subnormal children in 1914.

The subnormal child points the way for the normal child as the kindergarten child did for the older child.

SCHOOL LUNCHES

Free lunches furnished by charity were known in American cities as early as 1855. New York City, where the Children's Aid Society began this charity at that date, has now an extensive system of lunches in the elementary as well as the high schools, conducted by the coöperative efforts of the educational authorities and a committee of social workers, physicians, and teachers. Seventy-seven cities reported school lunches in 1912. Children in the eight largest cities of America have been cal-

¹ Appendix 5.

culated to be spending a million and a half for lunches every year, buying more than twice as much food value at the school lunch counter as on the street.

The Chicago school authorities once turned off the water in the schools when the Health Department declared it undrinkable. The children brought unfiltered water in bottles. Their home lunches are doubtless just as nutritious.

Seven schools in Manhattan serve lunches under the auspices of the School Lunch Committee. A superintendent and cook are employed, but the older children sell tickets and help in the service, for which they are given their lunches. They wear white caps and aprons, and those who handle bread wear white gloves. The dietaries are arranged for the consideration of the habits of the local population. Children are not allowed to buy desserts until they have consumed something substantial. There is a daily deficit of about one cent a meal, taking no account of the unfair burdens laid upon the already overworked teaching force.

The Washington Irving High School serves a dinner to the girls who come to the evening classes, so that they may avoid public restaurants and spend their leisure time in the gymnasium or reading rooms of the high school.

The Home and School League of Philadelphia developed a system of lunches from a beginning in two schools at the end of the nineteenth century to ten schools until it was taken over by the Board of Education. A forenoon lunch is offered during the recess at 10:30 and a fuller meal at the noon intermission. A school worker keeps a card catalogue of the dishes served and the food value of each constituent, as well as a record of the cost. Definite experiments have been made to find out the dietaries adapted to different localities. A Home Visitor is employed to examine the children and look after the underfed. In September, 1909, the experiment was undertaken of supplying lunches to the high schools on a coöperative plan. The principal and teachers in each school offer encouragement, but the pupils maintain the system. In the sixteen high schools 12,000 pupils and 500 teachers are fed daily. While the plant is furnished by the Board of Education, the preparation and service of the food is self-sustaining, the receipts in 1913 amounting to \$90,000.

The school lunch paid for by the taxpayer is no more paternalistic than free water in the schoolhouse.



Photograph by William Fallman Company. Courtesy of Home and School League.

PHILADELPHIA KINDERGARTEN LUNCHEON.



In Birmingham, Alabama, the lunch system is under the control of a committee of ladies, representing the District School Improvement Association. It was inaugurated in the Central High School about eight years ago, and is now carried on in three high schools and twenty-five elementary schools, five of which are schools for colored children. In the high schools about 2000 five-cent lunches are served daily, and in the elementary schools, the sales vary from 2500 to 5000.

The school lunch affords the only guarantee that each child shall have one good meal a day.

THE HOME SCHOOL

Providence has made a success of the Home School. It was organized in 1911, designed primarily for girls who had left school and were at work. Public school pupils were also accepted. A house was rented in a congested quarter and furnished by the students. Beauty was secured in spite of the limited expenditure. Four teachers take charge of groups of thirty girls attending two evenings a week. These women are not school teachers, but specialists in cooking, sewing and general housework. Superintendent Randall J. Condon, who had inaugurated such a school in Helena, Montana, said before leaving Providence for Cincinnati:

"The girls were to have the entire responsibility and do all the work connected with the school. They were to wash, iron, clean, sweep and dust; sew, mend and make-over; they were to cook, serve and eat; build and tend the kitchen fire, and sift the ashes.

"In the spring they were to plant the flower and vegetable garden in the backyard; tend it in the summer; cook the fresh vegetables, and pickle and preserve the surplus for the next winter's use. And there were to be long walks into the country for the girls who were free from work — to gather the wild flowers; and the wild grapes, apples and barberries for preserving and jelly-making. It was to be work, but work that was joyous. The talks by the teachers and the note taking were to be so closely related to what was being done that they would constitute an essential part of the work. Intelligence, skill, power, joy were the results; learning through study and work closely related.

"The cost and value of food and all other materials were carefully studied; personal hygiene and household sanitation were given due attention; feeding, bathing, clothing and care of younger children and babies occupied an important place on the program. And there were quiet hours for reading and meditation and serious conversation on the deep things of life; for these

girls were being made ready for motherhood — and the spiritual ideals of home life were considered fully as important as the training in household occupations.

"On Saturdays the mothers of the neighborhood brought their babies to receive advice and instruction from the Superintendent of Child Hygiene and a school nurse."

Philadelphia in 1914 equipped nine of its thirty-four domestic science centers for mothercraft to reach the girls of the seventh and eighth grades.

It is significant that as education is carried more and more outdoors and into industry indoor education should bear a closer resemblance to the home.

CHAPTER XI

OUTDOOR EDUCATION

THE hermetically sealed schoolhouse with rigid desks, inelastic curriculum, and impervious teacher is being rapidly supplanted by the open schoolhouse with movable furnishings and open-minded teacher. Light and air admitted freely are still not adequate for the freest education. City, as well as country, children must get into the open. Beginning with nature study in the classroom, Nature has rapidly invited the school outdoors.

A bird cannot learn to fly until it gets out of the nest.

NATURE STUDY

Nature study, which is now almost universal in American city schools, was introduced originally as a cultural subject. It has been elaborated until high schools often have biological laboratories comparable to those of colleges. The importance of nature study in the school curriculum may be illustrated by the Girls' Normal School of Philadelphia, in which a course is given to the normal students and to the young children in the practice school. Beginning with the kindergarten, the study is embodied in their games and songs, a representation of a bird teaching what flight and freedom mean; in the keeping of pets, to develop care and responsibility; in excursions to a farm, to the park, and to the zoölogical garden; in collections, *e.g.*, of cocoons and empty nests; in the use of pictures; in manual activities, and in literature. The limited number of specimens found in the park or in the country is amplified by the collections of the museum. Living specimens are brought to the school as far as possible; the methods are strictly those of the laboratory rather than of the classroom. The study is not confined to organic nature, but passes on to observations of the clouds and wind, the

action of water in all its forms, and the relation of these things to the work of man.

The menagerie of the Gary schools ranges from snakes and rabbits to Brer Fox. The children house and care for these pets.

SCHOOL GARDENS

School gardens naturally grew out of the nature study classes as the need of outdoor work became more evident; scientific pedagogy demanded that the laboratory yield to the field. The school garden movement began in 1891 in Boston, inspired by Henry M. Clapp, master of the George Putnam School in Roxbury. A collection of wild flowers formed the modest beginning of this movement. The next effort seems to have been in Dayton, where the National Cash Register Company established a boys' school garden in 1897. This resulted from the discovery of Mr. John H. Patterson that he rarely found a man to fail who had been responsible as a boy for farm and garden chores.

Such gardens are found now in all parts of the country, and the dimensions of the movement have warranted the organization of the School Garden Association of America.¹

In 1900 the Cleveland Home Garden Association distributed over 48,000 penny packages of seeds, making the enterprise self-sustaining from the beginning and supporting a test garden by the surplus. The Board of Education recognized the success of this endeavor and incorporated it into the city school system. In 1914 there were reported over 50,000 home gardens that had blossomed from these seeds. The school children of San Antonio cultivate 949 plots in the gardens attached to the 29 schools of that city. San Antonio has the advantage of a climate that enables gardens to be cultivated during most of the year. Los Angeles has 60 school gardens, of which the largest is at the Gardena Agricultural High School, where nearly 10 acres are given to vegetables, flowers and fruit. Over 15,000 grammar school children who received gardening instruction in the schools have engaged in home gardening under the direction of the agricultural department of the Los Angeles schools. A supervisor, an assistant supervisor, and three special teachers are employed

¹ Appendix 1.

who engage in propaganda in schools where there is demand for it, guiding the children in both the school and the home gardens.

Honest Congressmen might well direct their annual seed graft to the school gardens of their districts.

In Waltham, Massachusetts, the teacher of gardening promotes home gardens, as well as school gardens, by taking her long vacation in winter so that she can give the summer to her work. Memphis, Tennessee, employs a supervisor for its school gardening. Thirty garden sites, ranging from one-half an acre to an acre, are cultivated by 2000 boys in the fifth to the eighth grades. They give an hour and a half a week to gardening, while the girls of the corresponding grades sew. Each boy in 1913 had a plot ten by twenty feet for which he was held responsible. He had to keep a record of the cost, as well as of the quantities of the produce.

This horticultural instruction is given to both white and colored boys, but for some reason not to girls.

The children in New York City cultivated 6500 house gardens in 1913 and over 160,000 flower and vegetable plots. The most notable school garden in New York is that of the De Witt Clinton School, where 1000 children are occupied by means of two plantings, May and July. The school and home gardens of Philadelphia, that number 8000, have led to the cultivation of vacant lots, whereby 6000 persons secured their vegetables in 1913 at a cost of four dollars a family. Many communities conduct competitions to encourage the children to cultivate home gardens. The first year Spokane undertook this they held a fair at which garden stuff, valued at \$15,000, was exhibited by the 3500 children. The following year a fair was held in each of the thirty school districts and the winners at these local fairs took their exhibits to the central fair for the final contest.

The success of school gardening has led to the demand for agricultural education in urban schools.

AGRICULTURAL EDUCATION

School gardens and nature study in the lower grades evolve into agricultural education in the higher grades. The first of the city agricultural schools was developed at Menomonie, Wisconsin, by Senator J. H. Stout. The two-years' course

adopted for graduates of the elementary schools led to the establishment of the county agricultural schools in Wisconsin. Boise, Idaho, has put agriculture and horticulture on a plane with the other industrial studies. There is a four-years' course in agriculture, horticulture, animal husbandry, farm mechanics, and farm management. The school owns a poultry farm and uses thirty acres of land inside the state race track for demonstration farming. The pupils who work for eight weeks in the summer, eight hours a day, are given one year of credit in agriculture.

The seed mania is a happy substitute for the speed mania.

HOME CREDITS

Credit for work done at home is being given, especially by the schools of Oregon. The best measure of the work done outside the school is still its commercial value. The pupils of the high schools of Portland, Oregon, have received credit for an amount of work that demonstrates how boys and girls may carry themselves through school if properly aided by the authorities. Of the seventy-one girls and thirty-three boys who were graduated from the Jefferson High School in 1914, twenty-nine of each sex worked out of school hours and during vacations so that they averaged earnings of \$264 each in their school course. The working pupils of the four high schools are estimated to have earned \$80,000 in the four years. The occupations ranged from newsboy and caddy to chauffeur and music teacher. The maximum earnings were \$480 for work in a bakery and an electrical repair shop. The next highest were \$450, earned by a newsboy.

Oregon is the only state that has recognized home work so universally, but cities are experimenting.

Leavenworth, Kansas, gives one unit of credit for work in any vocation regarded worthy by the heads of departments. St. Cloud, Minnesota, requires home work for graduation.

"Sixteen units are required for graduation, at least fifteen of which must be regular school credits. For graduation with credit, seventeen units are necessary, two of which must be for home or continuation work, and for honorary graduation, eighteen units are required. Three of these may be for home or continuation work.

"A partial list of outside tasks, for which credit will be given, is as follows:

"Granite or paving block cutting or work in any of the local trades, shops, factories or industries, $\frac{1}{2}$ unit for each summer vacation.

"Steady work on a farm, followed by satisfactory essay on some agricultural subject, $\frac{1}{2}$ unit for three months.

"Running a split road drag or doing other forms of road building for three months, $\frac{1}{2}$ unit.

"Judging, with a degree of accuracy, the different types of horses, cattle and hogs, $\frac{1}{2}$ unit.

"China painting, oil painting, crayon, burnt wood, art, needle, or other handicraft or home decoration work, with exhibit, $\frac{1}{2}$ unit.

"Three months' employment in a dressmaking establishment, $\frac{1}{2}$ unit.

"Three months' employment as nurse, $\frac{1}{2}$ unit.

"Making a canoe or boat.

"Installing three or more electrical conveniences in your mother's home.

"Taking sole care of an automobile for one season.

"Preparing one meal alone daily for three months.

"Cooking meat and eggs three ways and making three kinds of cake.

"Students in the high school who shingle the house or paint the barn, swim 300 feet, make the beds every day for three months, sleep for one year in the open air or with open window, take weekly piano, violin, cornet, pipe organ or voice lessons, raise one-fourth of an acre of onions or other specified garden truck, clerk in a store or do any of a number of other things in the home or outside the school, will receive credit toward graduation."

Unless the regular home work can be credited to the child, the school will have to supplement the work of the home and in all cases ought to provide time for study, so that it may be done under expert guidance. Newark, New Jersey, and Bridgeport, Connecticut, have lengthened the school day so as to provide all the time necessary for study. The lack of quiet homes in the crowded districts has led to the opening of schools in New York City for voluntary study.

This system is required by law of the cities of California.

VACATION SCHOOLS

The vacation school has grown out of the recognition of the deficiency of the home and the city street. The first vacation school was proposed in Cambridge in 1872. The first school seems to have been started in Newark, New Jersey, in 1885, followed by Newton, Massachusetts, in 1888. About ten years later, the larger cities were all experimenting with vacation schools, chiefly inaugurated by women's clubs, subsequently incorporated in the school system. The effect of the vacation

school has been twofold: the abandonment of text-books has made it a fertile field for pedagogical experiment; the manifest benefits derived by the children have forced the consideration of the desirability of an all-year school.

The school that was vacated has been vitalized.

New York City conducted thirty-six vacation schools in 1914. The work is divided into three departments: opportunity class subjects, industrial subjects, and kindergarten classes. The opportunity classes are designed to assist children who failed of promotion in June. There were over 14,000 such pupils. Nearly half of them received certificates of success for the summer's work. The industrial subjects included a large variety of processes with the needle, cooking, housekeeping, and nursing for girls, and bench work, venetian iron work, basketry, chair caning, and hammock making for boys. The kindergarten not only relieved some mothers of the care of children, but permitted some of the older brothers and sisters to attend the vacation school, while the younger children were being properly cared for. The vacation school included a summer trade school and a summer school for mentally defective children. The total enrollment of the different vacation schools was about 30,000.¹

The vacation school has found its logical sequel in the all-year school of Gary and Newark.

OPEN AIR SCHOOLS

Open air schools have been inaugurated by many cities for the tuberculous children. These have succeeded so well that the methods commend themselves to progressive educators for the care of other children. Syracuse, New York, opened a class in 1911 for nervous and anæmic children, whose food and habits are as carefully considered as are those of tuberculous victims. Providence seems to have been the pioneer American city in the establishment of an open air school. Chicago now has nineteen open air schools.

Until "back to the land" is possible, back to the air is helpful.

¹ The New York vacation schools were open only in the morning. In the afternoon there were 213 centers of play, including 104 indoor playgrounds, fourteen open air playgrounds, seventy-one for mothers and babies, eight kindergarten centers. There were also sixteen evening playgrounds. The schoolhouses were opened in the evening for recreation.



THE OPERATING ROOM, FORSYTH DENTAL INFIRMARY, BOSTON.



The open air school at Montclair, New Jersey, is an outgrowth of effective medical inspection. The children are selected because of their need. They commonly come from homes that are utterly deficient in hygienic knowledge or care. At the schools they exchange their outer garments for those provided by the Board of Education. These consist in the coldest weather of a sweater, knitted cap, outside coat and mittens, a pair of felt knee boots, and a sitting bag of felt. Arctics are provided for the trip from the tent to the school building. Work begins at nine o'clock. At ten o'clock a cereal is served.

From 11:45 to 12 the class experiments under expert guidance, with soap and water.

The noonday meal follows, after which the children engage in the ceremony of brushing their teeth. A recess follows until 1 o'clock, when they crawl into blanketed beds for an hour's rest. The afternoon session begins at 2 with a five-minute recess at 3, and a light luncheon is served just before they start for home at 3:45. The growth in weight, efficiency, and hygienic habits is general. Most of the children come from homes where baths are a summer luxury, where they sleep in unventilated rooms and frequently go to bed as late as 11, drinking coffee freely, and occasionally liquor. The school nurse and medical inspector assist the teacher and the homes are visited.

The success of this method has led to the use of a classroom with open windows for normal children. The teacher thinks the work can be done in one-third less time under these conditions.

An investigation made by Dr. H. Lincoln Chase of Brookline indicates the physical advantages of an open air schoolroom. The children of the second grade in the Parsons School were observed for eight months in a fresh air room and their growth compared with that of children in the neighboring Winthrop School. The temperature in the open air school was seldom allowed to fall below 55 degrees in winter, while the temperature in the other school was from 65 to 68 degrees. In the former the children were protected against cold by the usual wraps and were given a glass of rich milk each morning. The children in the fresh air room gained 3.18 pounds in eight months as compared with 2.69 pounds for the other children. The fresh air children grew 1.68 inches, while the children in the conventional classroom averaged .95 inches. In the Parsons School

there was no case of contagious disease and fewer colds than usual. The work was the same except that drawing and manual training had to be suspended in the fresh air room in cold weather. This did not result in inferior work.

Hardy plants do not grow in hothouses.

The great possibilities of the open air school are revealed in the Durham School for colored children in Philadelphia. Little negro children — all below par physically — are not only given luncheon but breakfast. The day starts with a shower bath for the seventy-five per cent of the children that have thus far elected to enjoy it. Then breakfast consists of hot cereal, baked apple or stewed fruit, and toast. The children have increased in height, weight and chest expansion, while losing their tendencies to anæmia and tuberculosis.

City children will be fit for school in greater numbers when it is recognized that every home is not an Eden.

WELFARE WORK

The school's solicitude for the child is no longer confined to examining his mental or even physical progress. It must link up the school and the home. The Chicago Board of Education has created the position of Dean of Women in some of its high schools. The girls may thereby get the kind of personal supervision and counsel that they enjoy in colleges. The visiting teacher has been added to the staff of the New York schools as an intermediary carrying to the home the picture of the child's life in school and bringing to the school the home background of the child. In 1912 the seven visiting teachers maintained by the Public Education Association handled 1157 cases.

The visiting teacher accomplishes for the intellectual and social life of the child what the school nurse achieves for the physical life.

Provision is already made for the special treatment of crippled, blind, anæmic, and tuberculous children and for the physically and mentally defective. Similarly the visiting teacher can minister to the average child of foreigners coming to school before he learns English, to the children who are trying to get their working papers, and the children in the ungraded classes. In connection with the ungraded classes the work has proved so

valuable in taking children to hospitals and dispensaries, placing them in institutions and making needed adjustments in relation to their families and industry that the Board of Education of New York City has socialized the office by appointing two such workers in the department of ungraded classes.

The pastoral call of a visiting teacher creates a new attitude toward the school.

TRUANCY

The Board of Education of Chicago coöperates with the city and with Cook County through their courts and corrective institutions. The detention home for juvenile offenders under examination by the juvenile court is supplemented by a school under the supervision of the Board of Education. Behind the detention home on a lot 125 feet square is a two-story building surrounding a quadrangle 80 feet square. In addition to the school rooms, the building contains a gymnasium, a playroom for dependent children and dormitories for boys. There are five teachers for the seventy-five to one hundred and twenty-five children who remain in the home from ten to sixty days. Physical culture teachers give an hour a day to supplement the work of the others.

A child goes on growing even in jail.

The Board of Education has a freer hand at the Parental School, which was opened for habitual truants in 1902. There are 110 acres in the farm at Bowmanville, on which are eight cottages and a school building of eight rooms. The truant population in the school has grown from 13 boys at its opening to 320. The school provides instruction from the second to the seventh grade. Beginning with the fourth grade the boys spend an hour a day in the shops and an hour on the farm. Each cottage is under the care of a married couple, who are foster-parents to forty boys. Military drill and outdoor sports are a part of the régime. About 85 per cent of the boys, who remain in the Parental School from six months to a year, make good. Only the recommendation of the superintendent of the school can release them and then they are on parole for at least a year.

The institution is hopeful, but still does not imprison the real culprits, who are indicated by the title, "parental school."

A superior method of dealing with truants has been worked out in Chicago. In 1908 a room at the Jenner School was fitted up with work benches and desks for twenty-four boys. A capable teacher cares for habitual truants committed to her by the judge of the juvenile court. These boys live at home and can earn by their probation in this classroom the right to return to their own schools. There are now a dozen such rooms for truant boys. Eighty per cent of the cases require no further attention.

It is no longer necessary for a boy to commit an offense in order to be taught a trade.

EVENING SCHOOLS

The development of evening schools has progressed entirely beyond the vision of progressive educators of the passing generation. The old idea of the evening school was largely to overcome illiteracy. There were privately endowed schools for mechanics, but their function was not supposed to be consistent with the public school. The conventional evening school is still a place where the most elementary subjects are taught and is in great demand because of the foreign population in American cities. New York alone had forty thousand foreigners enrolled in the study of English in 1912.¹ Foreigners have to spend two or three years in the evening schools before they master the language sufficiently to enjoy other instruction. The Commissioner of Education reported in June, 1911, an attendance of 281,000 at the evening elementary schools for the previous year in the cities of over 10,000 population reporting. In the secondary schools there were about 100,000 students. Only 33 per cent of the pupils attended regularly, as compared with 90 per cent in continuation schools, showing the importance of the newer methods of instruction.

The most important expansion of the old conventional evening school has been in the free lecture system of New York City.²

¹ Day classes for immigrants are also held on Ellis Island.

² See pp. 252-254.

SCHOOL SAVINGS BANKS

The movement for encouraging thrift among school children was inaugurated by Mr. J. H. Thiry of Long Island City in 1885. Over one hundred cities now report school savings banks. The greatest handicap to the extension of this system has been the time required of principals and teachers in doing clerical drudgery. Elmira, New York, inaugurated a system in 1910 by which the pupils simply put money in their envelopes Monday morning, the teacher counting the money and writing her own and the pupil's names. The envelopes are then sent from the principal's office to the bank. About 75 per cent of the pupils in the grammar schools make use of the system. Three thousand pupils have deposited over \$23,000 in three years. This system has been organized in Little Rock. It was initiated by the United Charities and when the School Board took it over, they added to their membership a representative of that organization. Six banks united in paying the salary of a manager for the School Savings Association.¹

The school can teach both the science of thrift and the art of spending.

MUSEUM COÖPERATION

Coöperation between the school and the museum has generally been initiated by some voluntary organization. The Buffalo Society of Natural Sciences began in 1872 to conduct field excursions for pupils from the high schools. When elementary science work was introduced into the grammar schools in 1878, the science teachers were encouraged to bring their classes to the museum. In 1905 lectures at the museum were made compulsory for children from the fifth to the ninth grades. The Academy of Sciences of Davenport was a rival in this pioneer work. Beginning with 1878 the school children came to the museum informally. In 1902 the system was formally adopted and all the public schools were included.

The difficulty of transporting children to the museum has led to the practice of transporting exhibits to the schools.

More than 1200 schools in Pennsylvania are served by the

¹ Two hundred seventeen thousand pupils in the United States had on deposit a million and a half of dollars in 1914.

Philadelphia Museums. In St. Louis there is a museum under the care of the assistant superintendent of schools that is called the Educational Museum of the Public Schools of St. Louis, growing out of the World's Fair in 1904. In 1908 the curator reported one thousand different collections and 3200 duplicates. The Department of Health of the American Museum of Natural History coöperates with the schools of New York City by inviting classes to the museum and by sending collections to the schools. There are exhibits of water supply and general public health, including the disposal of the city's wastes and the relation of insects to disease. Thirty-five thousand primary and grammar school pupils attended in 1912. As the children can rarely go to the museum, five hundred cabinets are in circulation, reaching one-fourth of a million children in 1912. The museum also serves all the schools of the state through an act of the year 1899, designed "to provide that additional facilities for free instruction in natural history, geography and kindred subjects by means of pictorial representation and lectures, may be furnished to the free common schools of each city and village of the state." Under this law, the Museum of Natural History has undoubtedly acquired the most elaborate and beautiful collection of lantern slides in America.¹ The Field Museum of Chicago has been supplemented by a quarter-million-dollar endowment, the gift of N. W. Harris, to bring the museum to the schools. It was found that 22,000 out of 280,000 Chicago school children visited the museum in a year. A special automobile service now brings the exhibits to all the school children in their schools.

The schools now coöperate with most of the other public institutions. Organic education is the aim of the greatest municipal educators.

ALL-YEAR SCHOOL

In June, 1912, Newark, New Jersey, opened all-year schools, two in number, partly to demonstrate that there would be no physical injury in attending school in the summer months and partly to show the great economy of time and energy. The schools were located in congested districts where children had had experience in vacation schools. The children were largely Jewish and Italian, about 2000 in each school. There was an

¹ For library coöperation see pp. 243-245.

attendance of about 90 per cent. The school year is divided for these children into four twelve-week terms, permitting a child to attend three or four terms a year and to advance as rapidly as he can. At the end of three years 1000 children had gained one year's time. Both the principals testify that the health of pupils and teachers has been in no way impaired. On a very few days was the heat serious enough to be a hindrance. More work has been done in the open. The percentage of promotions has been slightly higher than for the rest of the city.

What has become of Shakespeare's boy who went unwillingly to school?

GARY

The climax in the reorganization of the elementary school has been attained at Gary, Indiana, where Superintendent William A. Wirt has revolutionized elementary education. The average school plant is in use only a fraction of the time that it might be, and during operation represents about 50 per cent efficiency. The Gary plant aims at 100 per cent efficiency for a maximum school year. For eight classes of 40 pupils only four classrooms are necessary. The other four classes are found upon the play-ground, in the school garden, on scientific excursions, in the work rooms, assembly room or laboratory. An eight-hour day is substituted for a five- or six-hour day to absorb the time and energy formerly spent in chores about the farmhouse. This chore time has become in most cities what Superintendent Wirt calls "street and alley time." The two months' vacation of the conventional school means another loss of 16 per cent, to say nothing of the time spent in recuperation in the autumn.

The full use of the school equipment involves Saturdays, Sundays and summer time.

An abundance of time is given to recreation at the Gary schools, thus organizing the play of the children and making the school fascinating as a place of play. Since the children are at the school, they all take advantage of this as contrasted with the use made of even such exceptional municipal play-grounds as those of Chicago.¹ The Gary school system is not yet able to meet its full ideal, but it is at work all day for six days a week, the attendance on Saturday being voluntary. The

¹ Appendix 2.

teaching force also volunteers for service on Saturday at \$.75 or \$1.00 an hour, depending on the fatigue of the work. The same method of compensation secures teachers for the evening schools. Instruction in athletics is to some extent given by the mature pupils.

The Gary system suffers temporarily, like all the other efficiency systems, in not having sufficient respect for the subordinates.

The regular workmen required for the maintenance of the school plant assist in the teaching. This economical device gives workmen continuous employment for twelve months in making and repairing appointments of the buildings, uses the labor of pupils, while furnishing them instruction by carpenters, cabinet makers, painters, plumbers, sheet metal workers, engineers, printers, electricians, machinists, foundrymen and clerical workers. Only union workmen are employed for this instruction.

The best tribute to this latest Hoosier schoolmaster is the employment of Mr. Wirt to reorganize certain New York City schools, by spending one week a month in the metropolis at the salary of a big city superintendent.

A COMPLETE SCHOOL IN BROOKLYN

Mr. Wirt began his experiments with the New York public school system at Public School No. 89 in Brooklyn. The building lacks a gymnasium, an adequate playroom, a branch library, a properly equipped auditorium and other facilities. The school was sadly overcrowded, the upper grades, including twelve of the forty classes in the school, having the full-time use of twelve classrooms, while the remaining twenty-eight classes had the half-time use of the other fourteen classrooms, a small auditorium and five cellar rooms. The theory was that the fifth hour of the school day was spent by the children in playground and auditorium. These being inadequate, they were not only congested whenever used, but in inclement weather nine classes were forced to use the five cellar rooms as study rooms. As a relief to this, it was provided that in some instances two classes should occupy the same room at the same time, in the hope that these distractions would induce concentration!



CLASS VISIT TO CARNEGIE INSTITUTE, PITTSBURGH PUBLIC SCHOOLS.



CHILDREN OF THE BOTANY CLASS CARING FOR THE SHRUBBERY ON SCHOOL GROUNDS OF THE FROEBEL SCHOOL, GARY, INDIANA.

The whole method was to compel the limited space to provide for the ancient inelastic system.

Mr. Wirt has boldly extended the four-hour day to a six-hour day by using all of the space in the building all of the time. This dispenses with the need of fourteen portable buildings that had been proposed. It also provides for a \$35,000 addition to the building in lieu of \$170,000, which the old methods involved. Sixteen additional classes can be cared for permanently by adding to Public School No. 89 a gymnasium and a swimming pool, two rooms for a branch of the Public Library, equipment for science laboratories and auditoriums, wardrobes for sixteen classes, and permanent playground, drawing and music studio equipment. Without these the building is being used by two schools of twenty-one classes each, alternating in the regular and special activities. Six teachers take their classes to the auditorium, where one of the classes dramatizes a theme for the entertainment and instruction of the other classes. The other children profit more than if they were all writing themes. Each teacher is responsible for one day instead of every day. Teachers may gradually be selected for their efficiency in regular or special activities; children may substitute the work of one of these schools for the other, so that the child who is ahead in arithmetic and behind physically need not mark time in a stuffy classroom instead of increasing his physical strength.

Teachers and pupils are not units in a system, but individuals in a society.

Mr. Wirt asks why all children should be on the playground at the same time, why each should have his private school desk or his private auditorium seat. Would we limit the use of parks to the hours between three and five, five days in the week, two hundred days of the year? How many street cars would be necessary if each person had to have his private seat saved for him? How many hotels would be necessary if each person who visits New York had to have his private bedroom and his private seat at the table saved for him all the year? Mr. Wirt says the hotel room used only four days during the year would be in use longer than the average school auditorium.

We let other people use our books in the public library, our pictures in the museum, our Pullman berth; why not use our schools with similar economy?

In fifteen years New York has spent \$105,000,000 for new buildings, and still has not provided an exclusive desk for each one of the 750,000 school children. Is it not time to try another method? It costs \$200 per pupil to provide classroom space, \$5 per pupil to provide play space, even in congested New York. The program at Public School No. 89 would permit the children to leave school during the auditorium, play and special work periods for home or other duties elsewhere. The system is adapted to the varied occupations of different communities and to all the different individualities in the school. This variable schedule permits the coöperation of all other child welfare organizations.

The twentieth-century school is not only always in operation ; it is always in coöperation.

CHAPTER XII

HIGHER EDUCATION

JUNIOR HIGH SCHOOLS

THE man who graded the old-fashioned school has been dead a long time. The division of the school life of the child into two periods of six years each instead one of eight and one of four is accomplished by the organization of the junior high school. A three-year junior high school course followed by a three-year senior high school course not only organizes the school better for the pupils that enjoy either, but tends to keep pupils longer in school. Gary, Evansville, and other communities find it desirable to have all the grades in one building, so that the children will become accustomed to the idea that education is not completed by the average child at his fourteenth year. The junior high school also makes possible teaching by special teachers earlier than the old system. This invites the sixth-grade child to go on to the seventh grade, where his routine will be less monotonous. It also encourages the ninth-grade child to go on to the tenth, because he has already become accustomed to high school life.

The methods of teaching are modified so that teachers of the seventh and eighth grades in Berkeley, California, must use a part of each recitation period to teach the pupils how to study. According to the law, no child under the age of fifteen shall be required to do home study. Another advantage of the junior high school is that it is better adapted to the physiological development of the child. It coincides with the beginning of adolescence, the child enjoys contact with several personalities, instead of only one, and boys get a larger measure of masculine instruction.

It is strange how an illogical division like that into elementary, grammar and high schools becomes a superstition.

One of the early junior high schools was organized at Evansville, Indiana, in 1911. A group of buildings occupying an entire city block comprises the junior and senior high schools, the auditorium and gymnasium building, and the manual training school. The manual training building also houses the commercial and household arts departments, equipped for a six-years' course. The gymnasium and swimming tank are furnished with locker and shower rooms for the use of 1500 pupils. The auditorium includes, in addition to its well-appointed stage and seats for 1600, a Grand piano, a victrola, a stereopticon and a moving-picture machine. The lunch room serves the pupils and teachers at cost. Fortnightly matinée dances at five cents a pupil are given under faculty supervision in the gymnasium. Both high schools enjoy self-government.

Many a city child never saw the old central high school building.

The Garfield Junior High School at Richmond, Indiana, emphasizes two main points in its organization: an adjustment of classes that makes it possible for pupils to advance at different rates according to ability, and an advisory relation between teacher and child. The teaching is done by departments, but each pupil has an advisory teacher who becomes familiar with his abilities, tastes and circumstances throughout his school course. The pupils entering the junior high school have largely decided for or against high school and college. They have begun to show their aptitudes, and many need additional interest to hold them in school. One-sixth of the work is therefore made elective, in three courses: foreign languages, English and industrial.

The child is father of the teacher as well as of the man.

SELF-GOVERNMENT

Experiments in self-government have been undertaken in schools of all grades. A School Council was organized in 1902 at the junior high school at Richmond, Indiana. It is composed of thirty-six members, who are elected by the assembly rooms. Primary and final elections are held, the latter conforming as nearly as possible to the city elections. All pupil activities are directly or indirectly in charge of the council. It meets once a

week, the principal acting as president. Five standing committees have charge of the school life, each committee meeting with a teacher as adviser. The pupils get experience in parliamentary government and civic duties, while actually managing the school body. The children of the Richmond junior high school subscribe to a revised Athenian Oath.¹

The William Penn High School of Philadelphia furnishes a good example of what girls in a secondary school can do. The authorities have gradually relinquished power, until the spirit of the school nearly eliminates questions of discipline. The hall where 250 to 400 girls do their studying is satisfactorily managed by the pupils. They also have entire charge of the lunch room where 2000 girls are served daily. The Executive Council of the Students' Association have asked permission to call all the pupils together, excluding the teachers, to discuss questions of deportment.

Two thousand girls talking overtime in their earnest endeavor to discipline themselves must reassure the suffragists.

The Social Workers' Club of the pupils sends out from twenty to fifty girls a week to hospitals and orphan asylums. The Students' Aid Club does the same work within the school, visiting sick pupils or sending lesson assignments to absent ones. At Christmas time the school unites in preparing presents for 1300 of the poorer kindergarten children and the 350 children in the municipal hospital. Principal William D. Lewis points out that it is not the form of government but the spirit that indicates the success of this community organization.

The students in the high school of Berlin, New Hampshire, are responsible for the care of grounds and buildings, involving not only physical supervision, but bookkeeping and the financial conduct of the enterprise.

High school pupils in the Los Angeles and Boise schools have engaged in the actual construction of school buildings for those cities. Coöperative work under the direction of experts is probably as valuable a form of self-realization and self-government as students can experience. This, however, is rather a preparation for industry than for citizenship and some form of self-government of their social activities is needed in the training of citizens. For this purpose the high school fraternity is

¹ Appendix 1.

doubtless a hindrance rather than a help. The organization of whole classes or schools on the all-inclusive basis on which society is organized is one of the important functions of the school.

If pupils can organize contests, they can organize co-operation.

VOCATIONAL EDUCATION

The old-fashioned educator wants to keep vocational from cultural studies, just as he wanted to separate the technical from the classical courses in the university. The recent tendencies in municipal education are in the direction of differentiating vocational work at the high school period, but providing a prevocational or junior high school course that will enable the children to go on with any kind of grade or professional training. A study of the age at which children generally leave school and a study of the psychology of the child at that time indicate the necessity of laying a scientific foundation for the child's work in life. It is found to be diverting and recuperating to divide the day between hand work and book work.

It is imperative for the full growth of the child that he have all of his faculties cultivated.

If the course of study is enriched by the newer methods and subjects, there is also a better opportunity to discover the talent of the individual child and avoid aiming at the hypothetical child. The original high school, like the original college, was a training place for the clergy. It was, therefore, necessarily cultural. Similarly, the majority of colleges and high schools are now essentially cultural schools because their curricula fit students for the teaching profession rather than any other occupation. The beginning of the transformation of the high school dates back to the introduction of manual training which took place first in St. Louis in 1880. The Scott Manual Training School of Toledo and the Chicago Manual Training School were opened in 1884. Still, the superstition persisted that the function of a high school was merely cultural. Until recently, it was very difficult to break down the prejudice against direct vocational training in the public schools. The sudden efflorescence of vocational schools, however, has its roots in the past. As early as April, 1897, Superintendent Randall J. Condon, now of Cincinnati, uttered the following prophetic words:

"A dream of the ideal and yet a dream which in the future may become a reality. . . . There were no longer Manual Training Schools, as such; there were no Mechanic Arts High Schools, no Commercial Colleges. Instead of these subjects being taught by unskilled teachers . . . instead of being presented in ordinary school rooms, or even school rooms especially fitted for the purpose, which at best are only imitations of the real and so have an element of unreality about them; instead of playing at banking and 'actual business'; . . . instead of all this I saw the industries of the community installed in such a way that there was an apprenticeship department in each, or a modern modification of the apprenticeship idea.

"The great wholesale departments, in leather, in cotton and woolen goods, in provisions, in the manufactories of silverware, of watches, clocks, shoes, etc., all the great industries offered abundant opportunity for the youth to not only become familiar with the work of each, but to discover in what special line he had adaptability. In each of these institutions there were light, airy rooms in charge of the most skilled instructors, where useful work was actually to be done by the boys and girls there employed. They were to be advanced from room to room — from the simplest work to that requiring the most skilled labor. This was not to be done apart from the school: it was the school, most effectively teaching in this way, and with the *mental development* of the pupils constantly in mind; all this work, done, *not for skill of hand alone*, but for the *power of mind generated and applied through manual labor*. And the important point was this: — As any group of workers produced a product which had a market value, they were to receive the money value of that product as a reward for their industry and application."

In less than ten years an elaborate system of vocational education has become nation-wide. Vocational schools may be classified as (1) prevocational, (2) industrial, (3) vocational, including technical, commercial and agricultural schools, (4) part-time coöperative schools, and (5) continuation schools.

PREVOCATIONAL SCHOOLS

The old manual training courses have been evolved into prevocational education in many schools. The purpose is to give more preparation for those who only finish the elementary course or to fit pupils better for subsequent technical work. As early as 1907 the Agassiz School of Boston offered industrial training for which 33 per cent of the boys of the sixth grade applied. Since 1909 the sixth, seventh and eighth grades have been included in the experiment. With the establishment of the Technical High School and the High School of Commerce in Cleveland it was found that provision had not been made for the

children who dropped out of the lower grades of the elementary school. The Elementary Industrial School was established in 1909 and met the needs of seventh- and eighth-grade children. It has been influential in retaining children who would otherwise have gone to work and probably remained unskilled through life. A second elementary industrial school has now been established, so that the two may be compared experimentally, the cultural elements being emphasized in one and industrial work in the other.

The new education is experimental, not dogmatic.

The state of Massachusetts has equipped a Practical Arts School in connection with the Normal School at Fitchburg. Pupils from the sixth grade are admitted to four courses, the completion of any one of which admits to the high school — a commercial course, a literary course, a manual arts course and a household arts course. Similar schools have been established in Indianapolis. All the children in grades seven to eight engage in such industrial activities as carpentry, joinery, repair work, art metal work, printing, bookbinding, sewing, dressmaking, art needle work, weaving, cooking and housekeeping.

Pupils may be transferred to another school if they prefer the conventional course, but no such request has been made.

INDUSTRIAL SCHOOLS

The industrial schools are commonly designed to give definite preparation to children of fourteen who would otherwise not go to the high school. One of the first of these schools was organized in Columbus, Georgia, in 1906. Applicants for entrance must be at least fourteen years of age and must have completed the sixth grade. Courses are offered in mechanical, textile and domestic arts and business training.

The Rochester, New York, Shop School is devised to teach trades to boys. Its work is so satisfactory that the work on the Rochester school buildings demands all the labor available. This includes cabinetmaking, electricity, plumbing, printing and carpentry. The girls' school is necessarily somewhat more commercial, as their products — millinery and dressmaking — have to be sold in the open market. The lunch room service of the domestic science department, however, serves both the per-

sonnel of the school and the employees of neighboring establishments.

"Tom Sawyer" seems to have been quite a pedagog.

The state of Connecticut, to meet the difficulty offered by the children usually finishing the elementary grades at fourteen (the factory law not permitting their employment until sixteen) has established schools at New Britain and Bridgeport. Trades allied with manufacturing, building, contracting, graphic arts, and textile occupations are taught in the day school. Twenty-five per cent of the instruction is academic, but related to the industrial training. The work is measured by the market as it must prove to have actual commercial value. From \$800 to \$1200 a month is earned — enough to cover the expense of maintenance except for teachers' salaries. It is expected that the apprentices will enjoy a part of these earnings.

The school is elastic in permitting any boy or girl fourteen years of age to enter any day of the year from his employment or from any grade in the school system.

A continuation school is also conducted, offering training half a day a week to those already employed. The instructor visits the factory to inspect the pupils' work. A half-time system is also employed, open to those who have finished half of the two-years' course of the trade school. A high school coöperative department also permits regular high school students to benefit by the trade school instruction, thus utilizing the equipment to the full and putting high school manual training to the test of meeting trade and commercial requirements. An evening school, open six nights a week, ministers to those at work, although each one is permitted to attend only three evenings a week. A vacation school is added in order that public school students may enjoy the benefits of the trade school.

The Manhattan Trade School for girls has been designed from the beginning and has stuck faithfully to the purpose of training girls who need the rudiments rather than equipping forewomen. It opened in 1902 with twenty pupils in a private house that could accommodate one hundred. In June, 1906, it moved to quarters where five hundred girls can be instructed. The present quarters represent an investment of \$200,000. The authorities have discovered what industrial opportunities are open to girls of fifteen and sixteen in New York City. The girls are

taught the rudiments of dressmaking and millinery so that they may have enough knowledge to meet the demand for girls as soon as the law permits them to take out their papers. The first occupations discovered to be feasible were the use of the sewing machine, paint brush, paste brush, and needle. The school is open all the year so that girls may come in during the slack time. There is a probationary period of a month to determine whether the girl should devote all of her time to her selected industry. Grammar, arithmetic, history, geography, and civics are taught, as well as physical culture. A girl is not permitted to work without being physically able to undertake it.

Twenty girls are chosen at a time, and for six weeks they have a daily one-hour lesson in cooking. They also serve the lunch to the other girls. It is sold at cost.

The work is graded: (1) practice work is ripped up and used again, (2) fair work is sold to the students or needy institutions, (3) trade work, up to the standard, is sold to the trade or private customers. The girls are thus put to the test of meeting the demands of the market; the money return covers the expense of material and supplies, for which ten thousand dollars had to be appropriated in 1914. A placement bureau was organized in 1908 that not only enables the school to locate girls, but to keep track of them.

Scholarships have been necessary because of the poverty of the students.

Boston has a similar trade school for girls conducted five days a week throughout the year with four brief vacations. The course of study requires two years. There is also an evening school in the winter for girls already at work.

Springfield, Massachusetts, has introduced a valuable method into its trade school. The local school board is the administrative head, but the state of Massachusetts requires a board composed of men engaged in the industries. The work is carried on by what is called the "job" or "project" plan. Each group of boys is given one day a week of classroom work related to their shop work. The remainder of the week is devoted to the job. Each job requires a definite amount of estimating, specifications, shop notes, writing, and drawing. Instead of dividing the day up into periods the work goes on until the job is finished. The boy thus becomes acquainted with the methods that will prevail

in industry. Before going to his job, he must have completed all of his written work. This provides an incentive not known in the ordinary academic course. The boys execute orders for the market and share the profits. The teachers are specialized so that the class work is given by an experienced teacher, the shop instruction by a practical mechanic, and the intermediate work by a man who has the qualifications of both.

The Altoona, Pennsylvania, Vocational Night School has an attendance of two thousand in a population of sixty thousand. Pennsylvania schools of this character have two-thirds of the expenses met by the state if the school meets the requirements as does this one.

The trade school is judged by the rigorous test of the industrial world.

VOCATIONAL HIGH SCHOOLS

On the basis of these new industrial opportunities in the grades, the largest cities are organizing vocational high schools for students who already have chosen their specialty. The Manual Training High School of Indianapolis still tries to hold together a student body engaged in preparation for twenty vocations. The work is elective under guidance. The school has two years of technical training in addition to its cultural subjects. Graduates of the art department alone occupy positions as lithographers, illustrators, designers, architects, and interior decorators. Other graduates range all the way from the mechanical trades to commercial occupations.

The big Eastern cities have been pioneers in high schools of commerce, but perhaps Omaha has excelled in accommodating its curriculum to the needs of the community. The training is commercial rather than mechanical and provides for the pupils who can stay only two years, as well as for those who can complete the four years. An intensive course is given to the two-year pupils who do all of their work in the school building, remaining from 8:30 to 4 o'clock. This course corresponds to that in the conventional business college. The four-years' course embraces the usual cultural subjects and specializes in the commercial aspects of Omaha's industries. The dairy industry is examined from the point of view of the manufactory and the health department. Omaha's importance as a grain and milling

center leads to a thorough investigation of this industry from the study of the wheat field to the examination of all the processes until the consumer is reached. Similarly, the stock yards and packing plants are studied. These local industries are supplemented by a museum giving connection with commodities and activities that are not in evidence in the local industries. A school of telegraphy has been equipped by the Chicago and Northwestern Railway Company and the Western Union Telegraph Company, in which actual messages are transmitted. The endeavor is to prepare the pupils for any distinctive local industry.

Commercial education is now something more than an extension of the three R's.

Los Angeles maintains a marine high school at its seaport, San Pedro. Under a nautical architect, the students learn how to build a boat, make and place the engine, and launch and run it. Shipping law is also a part of the course. Los Angeles prepares for sixty-five other vocations.¹

COÖPERATIVE SCHOOLS

The first coöperative school system, modeled on the German schools, was introduced in Cincinnati in 1906. Dean Herman Schneider of the Department of Engineering of the Municipal University of Cincinnati, inaugurated the system. The students alternate week by week between the university and the shop. This method has been appropriated by Fitchburg, Beverly, and other places, and developed under different experimental methods. The preparation is superior to that of a trade school in the facilities that the shop offers, while the city is spared all of that expensive equipment.

Dean Schneider is the expert adviser of New York's vocational system.

Fitchburg, Massachusetts, offers a four-years' course as in the conventional high school. The first year is spent wholly in school, the next three years alternating between shop and school. The boys are taken in pairs so that each has the same supervision in both school and shop. The boys receive apprentice wages amounting to \$165 for the first year, \$181 for the second, and \$206 for the third. The boy is thus induced to remain in

¹ Appendix 2.

ART GALLERY.
The Garfield Junior High School, Richmond, Indiana.



school. He can earn more money than if he did not. Each candidate is given a trial period of two months and at the end of that time, if his parents agree that he will continue for three years, the manufacturer undertakes to teach him the trade. The Fitchburg school was opened in September, 1908; the first class of journeymen were graduated in June, 1911. The classes engaged in the coöperative work maintain their social standing in the school, holding their own in the ball teams and classrooms.

York, Pennsylvania, followed the Fitchburg plan in 1911. More than one-third of the high school boys are enrolled in the coöperative industrial course.

The half-time school of Beverly, Massachusetts, is somewhat different. The pupils entering it must have reached the age of fourteen, but need have completed only the sixth grade. In the factory the pupils do not come in contact with the regular foremen or workmen, or in the school with their fellow-students. The curriculum is entirely differentiated. The trustees of the school retain full control of the pupils while in the shop, whereas at Fitchburg the school surrenders control of the pupil in the factory. The purpose of the Beverly plan is to emphasize the boy's progress in the trade and not to make him a cog in the factory wheels. A trained teacher gives the instruction rather than a foreman without pedagogical ability.

The pupil cannot be exploited and the manufacturer is free from suspicion.

The United Shoe Machinery Company, the leading industry of Beverly, has organized a separate department for this purpose. The company furnishes the equipment, raw materials, and drawings, and lays overhead charges against the school. Half of the piece price of the products accepted is paid to the pupils. The pay envelope is thus the boy's measure of his success in the school. The workmen have looked with favor on the school. More than one-third of the pupils are related to workmen in the factory. It has met with more sympathetic support from organized labor than any other scheme.

Employers must have apprentices; older workmen must have protection against child labor.

The coöperative school for girls offers similar facilities in the Woodward High School of Cincinnati. A four-years' course in the domestic sciences is given. By February of the second

year girls who choose dressmaking or millinery may specialize in these activities under trade conditions. In the middle of the third year they begin coöperative work through the coöperation of a millinery and a sewing establishment, spending one week in the trade and one week in school. The same kind of work is done in cooking, but as no establishment is ready to coöperate, the school is compelled to perform the trade function. This it has been able to do with a small profit.

A girl is still handicapped by the traditions of industry, if not of education.

CONTINUATION SCHOOLS

The German continuation school is also being adopted in America. Wisconsin leads the other states, having encouraged the establishment of thirty schools in 1912. The state is willing to aid each school to the extent of \$3000, and forty-five schools are provided for. This subsidy is supposed to meet the actual cost of maintenance for compulsory attendance of all pupils between fourteen and sixteen years of age for five hours a week. The expense per student per year is only about \$10.

The first sixteen thousand students were enrolled without erecting any separate building and without causing any loss of employment or wages to the pupils.

Cincinnati was the first municipality to create a continuation school, as it also provided the first part-time school. The manufacturers' organizations, the labor organizations, and the school authorities decided in 1909 to shorten the hours of labor without decreasing the pay. The working week of the boys was abbreviated by half a day in order that they might enjoy the cultural influences of the schoolroom. The voluntary school of apprentices (boys from sixteen to twenty-one years of age) in 1912 included 205 machinists' and 24 printers' apprentices. The compulsory continuation school is devised to continue the education of children of sixteen who have not completed the school course. 2300 children attended in 1912. Only 457 were given certificates testifying that they had completed the eighth grade, and one-third of them returned voluntarily the next year.

Home economics classes in connection with mothers' clubs meet for a two-hour session. 1200 women have been enrolled in thirty-six different school buildings.

Boston has organized a continuation school with the coöperation of manufacturers and merchants. The classes meet two hours two days a week for ten weeks. Pupils in the shoe, leather, and dry goods classes are mostly young salesmen in wholesale and retail houses who are preparing for higher positions. Pre-salesmanship classes are also organized for boys and girls. Banking and household arts have been recently recognized. The Massachusetts law now requires compulsory attendance of children between fourteen and sixteen years of age at the continuation school, when the board of education establishes it. The city pays half of the amount needed for the maintenance of such schools.

Why should we "cut the coat according to the cloth," instead of to the customer?

Massachusetts' experience influenced Indiana to the passage of an admirable law for continuation schools. No child under sixteen is permitted to go to work until he has passed the fifth grade. All children between fourteen and sixteen must be either in school or at work. If out of employment, they are required to return to school. This important period, which is a twilight zone in many states, is thus satisfactorily covered. The state subsidizes vocational education for these children. Daytime classes are to be restricted to persons over fourteen and under twenty-five years of age, and evening classes to persons over seventeen. The local boards of education provide the plant and the state pays two-thirds of the salary of each teacher giving vocational or technical instruction. The special tax of one cent on each \$100 of taxable property in the state is to be devoted to vocational education. Any part of the fund not spent within the year is dedicated to a permanent endowment for the promotion of vocational education. Wisconsin has now passed Indiana, requiring children up to seventeen to go to the continuation school four hours a week.¹

Education can no more be measured by a calendar than by a yardstick.

Chicago is experimenting successfully with continuation schools supported by organized labor working harmoniously with organized employers to solve the problem of the apprentice. There are carpenters' apprentices, plumbers' apprentices, elec-

¹ For the Wisconsin law see Appendix 3.

trical workers, and machinists in attendance. The carpenters' apprentices are laid off during January, February, and March and are required to attend classes in the Crane and Lane Technical High Schools. They are given two hours of architectural drawing, one hour of related mathematics, one of history and civics, one of English, and two of shopwork. The shopwork for the first two years is mainly in the simplest use of tools, for the third year it is house framing, and the fourth year stair building. The other trades have a similar curriculum, but apprentices attend school for half a day each week during the school year.

The schools are hopefully pouring oil on Chicago's troubled industrial waves.

VOCATIONAL GUIDANCE

Vocational guidance must accompany vocational work if we are to save the waste in industry. The first Vocational Bureau was founded in Boston by Mrs. Quincy Adams Shaw in January, 1908. Professor Frank Parsons organized the Bureau. In each elementary school two teachers are appointed vocational counselors, one to deal with graduates, the other with pupils who drop out. The Vocational Bureau arranged a course of instruction for the counselors. The counselors meet twice a month to discuss the educational and vocational opportunities of the city.

In February, 1913, the School Board of Boston organized the Department of Vocational Counsel. Its purposes are to gather vocational information, to train counselors to help the pupil at home, to decide as to the appropriate vocational high school, to follow up the pupil through the high school, to assist him in finding employment when he has to go to work, to keep track of him in his work, to help him adjust himself or readjust himself, and to study the social and industrial histories of the young workers. The counselors attempt to secure positions by coöperation with business men, originally using the summer vacation for experiments.

Professor Parsons' successor, Meyer Bloomfield, is helping to inaugurate the New York vocational bureau.

Grand Rapids has introduced a variant on the Boston system under the direction of Principal Jesse B. Davis of the Central High School. The Grand Rapids plan is not to have a body of professional counselors, but to use the department of English as

a means of drawing out from the pupils expressions of their interest and ambitions. The themes discussed give some idea of the methods of vocational guidance, in which the department of English has the help of six teachers who are assistant-principals in charge of 250 pupils each.

At last the round pegs are finding their way to appropriate holes.

JUNIOR COLLEGES

While the high school is being extended back into the elementary grades to catch more of the great majority who fail to use its advantages, it is also being projected forward to supplement the work of the universities. California passed a law in 1907 giving the high schools authority to add two years of college training to their curriculum. Fresno, in the San Joaquin Valley, two hundred miles from any institution of higher learning, seemed to be the logical location for the first junior college. The first year's enrollment of twenty increased by the third year to forty. The instruction has amounted to only \$100 per capita, not higher than that in city high schools. A tuition of \$4 a month is charged to graduates of high schools outside of Fresno. This may prove to be the means of relieving the great universities of the state of the first two years of work, the plan on which the University of Chicago was organized in 1892.

Municipal functions are reaching upward as well as outward.

MUNICIPAL UNIVERSITIES

At the crown of the municipal education system is the municipal university, represented to-day by the institutions in New York, Cincinnati, and Akron, Ohio. An academic institution was transformed into the College of the City of New York in 1866. In 1908 a magnificent group of five buildings on Washington Heights, erected at a cost of \$5,000,000, was opened. The College provides tuition for 1300 college students, 2500 preparatory students, and special instruction for over 3000 teachers, and 500 evening students. Other more popular features are conducted for the benefit of the citizens. \$600,000 annually is spent for this instruction, which is free to any boy in New York City.

New York will give a boy free instruction from babyhood to the doctor's degree.

The municipal university of Cincinnati is organically related to the public school system. It not only has the usual academic and professional courses, but a College for Teachers with a faculty of twenty-seven. It provides a prevocational course for high school students so that they may better prepare for the work of the college. As intermediary between the college and the school system, is the Professor of Secondary Education, who gives half of his time as special assistant to the superintendent of schools.

The organic relation of higher and elementary education was first completed in the municipal educational system of Cincinnati.

The university is distinguished from most others not so much by its municipal support as by its municipal coöperation.

"Coöperation has become the keynote of University activities, this term being defined as 'the plan for using all existing local establishments, whether public schools, factories, hospitals, social settlements, museums, libraries, zoölogical gardens, water works, gas and electric plants, and street railways, in the training of men and women for practical life and service.' 'Training in real life for real life' is this University's educational doctrine and 'Co-operation in Service' its ideal."

The training of the students is incidental to the protection of the citizens. The Children's Clinic of the Medical College maintains milk supply stations and visiting nurses. The Bureau of City Tests is in the Department of Chemistry of the Engineering College. In one year 660 samples were examined or tested by this Bureau. Paints were detected containing benzine instead of turpentine; waterproof felt was found loaded with asphalt, and rubber pump valves made of a vegetable substitute. Coal was exposed with forty-four per cent ash.

There are 115 places in the city of Cincinnati and vicinity outside of the university where its representatives are regularly at work teaching, lecturing, investigating, doing coöperative work or social service. The university coöperates with seventy-four manufacturing plants, construction companies, railways, and the City Engineer's office. Students receive wages for this shop work. Forty-seven per cent of the students were born in Cincinnati, and sixty-two per cent are living at home in the city. Eighty-five per cent of the men have been at work before going

to the university and seventy-four of them remain at work while attending the university. Sixty-one per cent would not have gone to a university had there not been one at home. Thirty per cent of the women worked before going to the university. The sexes are about evenly divided in a total attendance of nearly 2000, one-third of whom go to evening classes.

The municipal university of Cincinnati is the keystone of the city's educational system where other universities are millstones to the secondary and elementary systems.

The city of Akron, Ohio, has taken over Buchtel College. The engineering department follows the lead of Cincinnati in coöperating with shops. Students are assigned to shopwork in July and accepted as students in September. Five years of eleven months are needed to finish the course. Students are paid for their shopwork. The number of students is limited by the industrial openings in Akron. The city is authorized to spend not to exceed five mills for the support of the city university. Ohio has thus a second municipal university, with Toledo experimenting and Cleveland aspiring to organize its various colleges into one municipal institution.

The complete training of public servants and citizens of both sexes is now within the province of the municipal school system.

CHAPTER XIII

PUBLIC LIBRARIES AND MUSEUMS

AN institution of culture, second only to the public school in importance, is the public library. New York State passed a law in 1835 providing for the establishment of district school libraries. The first step in legislation for the establishment of public libraries seems to have been taken by the Hon. Josiah Quincy, Jr., Mayor of Boston, in October, 1847. The city council passed a proposal of his to request the legislature that Boston be allowed to establish a free library by taxation. This was granted the following winter, and was probably the earliest legislation of the kind in any part of the world.

The first general state law permitting the establishment of libraries was passed by New Hampshire in 1849. Two years later, the Massachusetts Legislature passed a similar law extending the privilege already granted to Boston to the other communities in the state. The movement spread through New England and then to those parts of the Middle West that had been settled by New Englanders. These libraries were embryonic. The modern public library dates only from the formation of the American Library Association in 1876.

It is well to remember that more people read to-day than ever before.

STATE AID TO LIBRARIES

Massachusetts, in 1890, gave its governor power to appoint a commission of five to encourage the establishment and growth of public libraries in the state. The results accomplished by this Massachusetts commission are entirely disproportionate to the expense to the state. The towns accepting the provisions of the law receive a nest egg of \$100 each. This involved, in 1891, an expense of \$3600 for the purchase of books, and a decreasing rate ever since.

A similar law was enacted in New Hampshire in 1891 with equal success, and now there are thirty-seven states with such commissions.¹

Another form of state assistance to libraries is found in the comprehensive statute passed by New York in 1891, which intrusted the free library of the state to the regents of the university, and provided for assistance of various kinds to the towns, the most distinctive result being the great extension of the system of traveling libraries. New Hampshire is in the lead again in having had a bill presented to her legislature during the winter of 1892-1893, drawn up by a member of the State Library Commission, making it obligatory on a town to vote on the library question every year. The results of this legislation and of the long period of education which has produced it, are to be found in the extensive development of public libraries in many of the states of the country, led by Massachusetts. There is only one town in Massachusetts without a public library (January 1, 1915) and that is Newbury, which enjoys the privilege of the Newburyport Library.²

Massachusetts heads the white list, but only forty-four of its four hundred and four private and public libraries are open on Sunday.

THE OPEN BOOK

The modern library is a complex educational institution with broad democratic functions. It differs from the modern school system in elasticity and from the ancient library in universality. Mr. Herbert Putnam says:

"The motive of the old-time library was accumulation; the motto of the present is use. The former was content to respond to demand; the latter seeks also to create it. The constituency of the former was, in consequence, only the student-scholar, who knew the value of books and had positive need of their service; the constituency of the latter has no admitted limit within the legal area. For it conceives the possible service as extending to every man, woman, or child, whom any worthy book may serve in any worthy way."

¹ For a list of the state library commissions, see Appendix 1.

² Two hundred and seventy-five towns in Massachusetts own their libraries. Thirty-nine have free libraries in the management of which the town has some representation. Twenty-seven have free libraries, to which the town appropriates money, but is not represented in the management. In the remaining eleven towns there are free but independent libraries.

Many of the great libraries of the world have been simply reference libraries. This is true of the British Museum, the National Libraries in Paris and Berlin, and the Library of Congress in Washington.

Every library makes definite provision for books of reference, and all good library buildings include a special reference room. Libraries which do not give the public admission to the shelves of the general library provide books of reference easy of access in the reference room. To let the public handle reference books is not enough. They must be allowed to select books from the shelves.

The first large city library to provide books on the open-shelf plan was that of Cleveland, which introduced this system in 1890. The transition from the old method was effected with comparative ease, and they experienced none of the difficulties put forward by those who distrust the reading public. Two-thirds of the books possessed by the library are freely accessible to the public in the general circulation room, the reference room, and the children's room. The remaining books consist largely of duplicates and public documents. As books are drawn from the open shelves, duplicates — if they exist — are inserted, there being no "dead" or inaccessible books in the library.

A live librarian cannot tolerate dead books.

The tendency in public libraries to-day is to make all the books in the branch libraries accessible to the public, but to limit access in the main library to the open shelves. This is done not only for the protection of the books, but for the protection of the readers. It is undesirable to limit people to a card catalogue which is generally a hopeless mystery, but it may be just as bewildering to give them access to an unlimited number of books. The open shelves are therefore used for the display of a comprehensive collection of books which people can handle easily, from which they can borrow directly, and which can be administered more cheaply and satisfactorily than if each book has to be brought out on request.

In a good library the great preponderance of books borrowed are drawn by the people personally from the open shelves.

Chicago now has 450,000 volumes in closed stacks and 45,000 on open shelves, yet more than half of the books circulated come from the open shelves. This is by no means the limit aimed at

in Chicago, the librarian, Mr. Henry E. Legler, desiring a perfectly elastic system. It does, however, accomplish an educational function through the process of suggestion by an expert mind, without the pernicious censorship exercised in the main Boston Public Library and some others. The public must have impartial service, even if limitations have to be put upon the borrowing of books by the people.

Ecclesiastical or capitalistic censorship is intolerable in a democratic library.

DEPARTMENTS

Mr. F. M. Crunden introduced at St. Louis, thirty years ago, the practice of supplying a large number of duplicates of the best novels to be lent for a week at a time for a charge of five cents a volume. In this way fifty or a hundred copies of popular novels have been provided without burdening the funds of the library or encroaching on the privileges of other readers. By the same system fine editions of standard novels have been added to the library. The plan was introduced in Milwaukee in 1899, with equally gratifying results. It is now in common use even in small libraries.

The Newark, New Jersey, library has moved all of its fiction to a special room on the first floor, thus relieving the general lending room of those who want to look at or borrow works of fiction.

Even when all the reference books and many other volumes are readily accessible, the average reader will need the personal assistance of the librarian. Increasingly catalogues and indexes are made more serviceable and intelligible, but they cannot give the average patron of the library the omniscience that he requires of the library staff.¹ A separate Technology Department with

¹ On one day readers in Bates Hall (The Boston Public Library) asked information on the following subjects: Polish books. Who predicted the greatness of New York City? History of the United States. Martin's History of Franklin County, Ohio. Express 4,962,000 in Roman characters. Shakespeare's songs. Vocational schools in Boston. Commercial law. Walt Whitman's works. Dead sea. Lasalle, the socialist. Notable Americans. Use of egg albumen. Home gymnastics. Lowell Institute lectures. United States fisheries. Poem of Singing Leaves. Glaucoma of the eye. Shakespeare's Henry VIII. Emma Marshall's novels. French and German indexes of magazines. Russian books. German socialism. Electric meters. Heads of families in First Census of United States. Morse's telegraphic code. Bunyan bibliography. Lieutenant Totten's works. Livery

expert in charge is now maintained by many of the larger libraries. The Newark library conducts a translation bureau and gathers information for the use of local industries and enterprises. St. Louis and Boston each provides a writing room with a public stenographer who assists students either by taking dictation or by doing research work. This is done at the students' expense.

Chicago, Cleveland, and other libraries provide a room for club women and furnish special facilities in finding bibliographies for club programs and even in arranging the programs. In Chicago the room contains special collections of books and pamphlets on citizenship, the modern drama and other subjects of current interest. Cincinnati has one of the libraries that have opened teachers' rooms. This room in Cincinnati keeps on its shelves a collection of the best children's books arranged by grades, materials on children's literature, courses of study in public school systems of various cities, books on story telling, and other subjects of pedagogical interest.

Club women and teachers have long merited special attention from the public libraries. Now the citizen is justifying exceptional consideration. Chicago, Cincinnati, Detroit and Louisville have Civics Rooms with collections of appropriate books, current periodicals, and clippings arranged in convenient files.

Chicago has just put on open shelves its foreign books to the number of 30,000 volumes in seventeen languages. Passaic,

companies of London. Scharf's history of Texas. Wool waste. Water gas. Class mottoes. Stories for Junior Christian Endeavor work. Poetry of the American Revolution. A portrait of Sir Francis Bernard. Milton books. List of public schools in Boston. City of Seattle, Washington. Philippine Islands. Life of Nero and newest fiction. Foreign menus for Christmas dinners. Boys' clubs. Climate of Para, Brazil. Statistics of deaths in Boston, London, Dresden, and Munich. Boston city government. Bigelow genealogy. Pictures of wood nymphs. Biographies of prominent men of to-day. Who was Gassendi? Open shelf system in libraries. Electrical apparatus. Bible stories. Bible characters. "New Thought" books. Forestry bill in last session of Congress. Parks. Greek architecture. Psychic treatment of nervous diseases. Agriculture. American Book prices current. Telegraphy. East India Company. Laundries. Coffee-houses. English heraldry. Greek drama. Municipal elections in Boston. United States consular service. Signs of the Zodiac. Predestination. English composition. Text-book on zoölogy. Hypnotic therapeutics. United States War Department reports.

Many books were asked for by name, and numerous routine questions were also asked and answered.

New Jersey, has done some remarkable work with the foreigners of that city. Five hundred books in eleven foreign languages secured such a patronage that they increased the circulation of the library twenty-two per cent, the books averaging a circulation of twenty times each during the year. At the suggestion of the library board a library committee was formed for each group to aid in the selection of books. These committees helped in the listing of books and in conducting public lectures, furnishing their own lecturers.

The public library is not a blind leader of the blind.

Philadelphia leads, but New York is one of many libraries to house a library for the blind, New York also maintaining a teacher of the blind. In 1912 she paid 584 visits to homes and institutions, exchanging nearly the same number of books. The New York collection of 5875 books and 4197 music scores is sent all over the Union, only 8000 out of its 22,000 circulation being in Greater New York.

The provision of periodicals is another feature of the public library, including usually several copies of the popular magazines and as wide a range of technical journals as is demanded by the constituency. Daily newspapers are also provided occasionally, embracing those of most of the chief cities of the country. The monthly periodicals are sometimes circulated by the larger libraries with restrictions limiting the time for which they may be borrowed. This plan is unnecessary where they are lent for five cents a week, as in St. Louis and elsewhere. Smaller libraries are usually content with providing them in the periodical room, which is one of the architectural features of the best library buildings. The periodical room draws the least earnest but often the most needy readers.

In large cities the general reading rooms of the library often reduce the number of the unemployed, especially in cold weather.

CHILDREN'S ROOMS

There is no more important work done by the libraries than that with the children. This has become so significant that every public library makes architectural provision for it in the main building and many of them in their branches. A child is not only prepared thus to be a better patron of the library than

his elders, but enjoys the preparation. Brooklyn has one library building designed exclusively for children.

The first progressive children's department was established in Pittsburgh in 1898.

From the administrative office in the Pittsburgh central library missionaries were sent to all parts of the city, even into the homes until, in 1909-1910, the Children's Department had 227 book-distributing centers. Nine of these were in library buildings, the remainder being housed in quarters donated by school systems, missions and homes. In most cases, the city was spared the expense of maintaining these centers. Play-ground reading rooms, conducted under the auspices of the Pittsburgh Play-ground Association, required of the library only the salary of the library assistant. The children's story hour, which is now well-nigh universal, is designed to be entertaining and to give an appreciation of literature, but has as its ulterior purpose the use of books.

The Training School for Children's Librarians was the logical outgrowth of this Pittsburgh movement. The children's rooms and home story hours are part of the laboratory equipment of this school. The Cleveland Children's Department was re-organized by the first assistant from Pittsburgh.¹

Miss Anna C. Tyler in 1914 reported for New York story hours in forty branch libraries. Over 45,000 attended these 1929 meetings. The boys' gangs, that first looked upon the "Story Lady" as an easy victim, have been subdued and help to organize the groups. A librarian in each branch is trained by Miss Tyler to officiate.

The librarian goes out into the by-ways if not the hedges to gather them in.

An indication of the comprehensive character of the library work for children which is done by the Brookline Public Library is thus reported by the Free Library Commission:

"The most important development in the public library of Brookline has been an extension of its work with the public schools. The chief character-

¹ Cleveland operates 2 children's libraries and 11 children's rooms in its branch libraries. Seven high schools and 10 elementary schools are equipped with children's libraries. There are 360 classroom libraries and 57 home libraries. Forty or fifty inviting books are sent to families distant from the branches, after the manner inaugurated by Pittsburgh. One afternoon a week a visitor meets a dozen children, reads stories or plays games, and distributes books.



THE NEW YORK PUBLIC LIBRARY.

Story hour on the roof of a branch library, East Houston Street, New York.



Courtesy of J. and R. Lamb, New York.

EXTERIOR OF ROOF GARDEN, SHOWING CENTRAL FOUNTAIN, GOVERNOR FLOWER MEMORIAL LIBRARY, WATERTOWN, NEW YORK.

istics of the work undertaken have been: First, visiting the schools by the assistant, to learn the needs of pupils and teachers; conferences with the teachers at the library, to aid in the selection of books; and the preparation of printed lists. Second, issuing to teachers, besides the seven books allowed for their personal use, twenty or more books each, drawn either from the special collection in the school reference room, which contains many duplicates, or from the main library, to be used by pupils in school or at home, in connection with their lessons or simply for recreative reading. Third, the special assistant has charge of the school reference room during the afternoon, and assists pupils who resort there for the purpose of looking up topics of study or for collateral reading. The room is entirely distinct from the regular children's room, with a seating capacity of ninety, and some six hundred volumes for recreative reading. Fourth, systematic instruction in the use of the library is given by the assistant in charge to the pupils in the eighth and ninth grades of the grammar schools and the first year in the high school, who are brought to the library in classes, accompanied by their teachers. The lowest grade is taught about the make-up of a book, the title-page, copyright, table of contents, and index, and how to use them; also the chief facts regarding the binding, and the use of the commoner reference books; the next grades take up more advanced reference books, and learn to use the card catalogue; while the high school students are doing some simple bibliographical work."

The Buffalo library provides special reading lists for children and for teachers in the guidance of children. One of these is an admirable bibliography on American history for young folks. Another is an excellent list for boys and girls from fourteen to eighteen years old, devised to effect the transition from the children's room to the main library. A still more elaborate list, called "Classroom Libraries for Public Schools," listed by grades (to which is added a list of books suggested for school reference libraries), is designed to assist the library in lending books to the public schools. The Buffalo library also provides reference books for the schools, purchasing them with a fund supplied from Albany, on the basis of examinations of the schools made by the Regents of the State University.

There are no "Keep Off the Books" signs in children's rooms.

CIRCULATION

Library circulation figures may be as misleading as vital statistics unless we have some basis of interpretation. In general, however, the number of times a book is used testifies to the extent of its service in the community and the cost meas-

ures the community's appreciation. Cleveland, with a population slightly greater than that of Detroit, had a circulation in 1913 twice as great as Detroit's, and the library income was also double that of Detroit. Pittsburgh, with a population less than that of Baltimore, circulated nearly twice as many books, but enjoys an income almost three times as great as that of Baltimore. Boston's registered readers are almost the same in number as those of St. Louis. Its circulation is somewhat greater, but its income is 75 per cent more. New York naturally leads American cities in circulation and most other library functions that can be statistically recorded. In 1913 the 964,000 volumes in the circulation department went over 8,000,000 times to New York homes. The combination of the Astor, Lenox, and Tilden libraries, with the development of the branch system, has doubled the circulation in ten years. Nearly half a million of the books circulated by New York are in twenty-six foreign languages. This enormous circulation does not include Brooklyn, which issued over 4,000,000 books in that one borough.

Busy New York borrows more than 15,000,000 books a year.

Chicago has now passed Philadelphia in home circulation, the figures having reached 4,500,000. Detroit has extended its circulation by abolishing the requirement of the guarantor and by extending the library privileges to non-residents. This increased the circulation forty per cent. Grand Rapids has abandoned the practice of permitting renewals of books, now lending them for four weeks instead of two, and has increased the fine for failure to return a book promptly. Many Massachusetts towns lend any number of books on one card. The number of readers in different communities varies remarkably. Only five per cent of the people of Baltimore and 13 per cent of the people of Boston use the library, while Springfield, Massachusetts, grieves because not more than one-third of its population are library readers.

The millennial ideal of the library is to have all its books out every night.

Next to the foreign books perhaps the most useful addition to the circulating departments of American public libraries is music. Boston does not lend its music collection. Milwaukee, Pittsburgh, and other libraries have sheet music to lend; Chicago has just opened a special collection that promises unusual

service. There are 2100 bound volumes of music and 1000 copies of sheet music in flexible covers.¹ Cards are issued only to holders of regular library cards. Bound volumes may be borrowed for four weeks and sheet music for only two without renewal. The first day this collection was opened, one hundred special music cards were issued and about two hundred volumes borrowed.

The San Francisco Free Library is to receive the music collection of the late Mira Straus Jacobs, the composer. The first installment of 1600 compositions are already available.

The Evanston (Illinois) Public Library has a music collection endowed by Professor George A. Coe in memory of Mrs. Coe. It was given to promote the appreciation of music. The selection is designed to aid people at all stages of musical culture. Music, pianola rolls, and books on music are catalogued together. There are scores of the important operas, oratorios, and choral compositions, as well as 400 pieces of sheet music; there are 1300 books on music, and 500 piano rolls. The music room is equipped with piano and pianola, where compositions may be tried before being borrowed.

Music hath charms to soothe the urban breast.

Newark, New Jersey, has a collection of over 50,000 mounted and 300,000 unmounted pictures for educational and trades' work. These are supplied to teachers in each of the fifty-six schools and many artists and designers. In 1912 the library lent 56,000 of them. It has also 1000 lithographs, etchings, and engravings, 1000 large photogravures of the world's best paintings, and 3000 photographs of paintings, sculpture, architecture and notable places. The Boston library sends out 2500 portfolios of pictures annually to the schools. The branches also supply portfolios containing about twenty-five pictures each. These illustrate fine arts, physical and commercial geography, and sociological subjects. Branch collections supply about 40,000 pictures a year.

The graphic methods of the library help to dispel the superstition that all learning comes from books.

¹ The lending is facilitated by having the vocal sacred music bound in maroon, vocal secular in crimson, piano in dark blue, organ in light blue, violin in tan, and chamber music in green.

BRANCH LIBRARIES

The most intimate service of the public library in the large city is performed outside of its main building through branches and special libraries. The first free branch library in the United States was the East Boston branch of the Boston Public Library opened in 1870. The branch libraries in large cities are equipped like the central library except for unusual books of reference and expensive editions.¹ Many of these branches have most of the departments of the central library and not a few of the buildings contain auditoriums.

The branches help the library to gather readers as well as to distribute books.

Newark, New Jersey, has a business branch of the library, located in a building erected for the purpose, which has been leased for five years. It occupies two floors, 37 by 90 feet each. Among the other services performed by this branch there has been made an index of the manufacturers and manufactures of Newark. A monthly publication called *The Newarker* is issued to direct the attention of business men to Newark and the service of the library.²

The library has been responsible for the organization of a Special Libraries' Association, now including several hundred members — librarians of banks, insurance offices, manufactures, railway offices, and scores of other kindred institutions.

The latest experiment in library buildings is the Brooklyn Children's Branch at Brownsville. The crowded condition of the regular branch in that section compelled the establishment of a special building for children. Their patronage of the old building was so pressing as to make it unpopular with adults. The new building, in architecture and decoration, is specially designed for children. The entrances and exits are separate. The floor coverings are designed to deaden sound. There are no push buttons within mischievous reach and rounded corners make projections harmless.

¹ The New York library has forty-one branches of various kinds. Chicago has thirty-two branches and Brooklyn twenty-eight, while Baltimore has seventeen and Boston thirteen. Pittsburgh, Detroit, and St. Louis have each six or more elaborately appointed Carnegie branch libraries.

² See Appendix 2, for statistics of the Newark Business Branch.

TRAVELING LIBRARIES

A branch library is superior to any other circulating medium, but it is not yet possible to have enough of them to serve every section of the city. The Boston Public Library has over 800,000 books in the central library and a quarter of a million in the branches and reading rooms. The nine largest branches are libraries of sufficient importance to average 20,000 volumes each. Boston serves 30 branches and reading rooms, 62 engine houses, 36 institutions, and 39 public and parochial schools with its daily service by its own delivery wagons. In addition to this, its branches send out books on deposit to 157 places. New York meets its population's needs through 894 stations, including fire and police departments, schools, factories, and department stores. Brooklyn has 275 distributing agencies, seventeen of which are the Carnegie branch libraries.

The service to business houses and factories is becoming a very important feature in public library work.

A downtown service is carried on by St. Louis in one of the big department store buildings. Messengers leave the central library at ten minutes before the hour and reach the station on the hour, so that shoppers and the business community can rely on a prompt service. Chicago furnishes books to twenty-seven mercantile and industrial establishments. These business houses furnish the space and the librarians, the Public Library providing the books. Some of the librarians give their entire time to library service and others engage in clerical work for the firm. The salaries of these librarians amount to \$12,000 to \$15,000 a year. The burden on the library amounts to about \$3000 a year.

The circulation of many libraries has been carried on through delivery stations where people could consult the catalogue, and deposit and receive books. The use of these stations presupposes a knowledge of books on the part of the borrowers which is not warranted. It is found desirable, when possible, to substitute traveling libraries for these exchange stations. Chicago has been especially successful in superseding the delivery stations. Libraries of from 500 to 1200 volumes are put in charge of people qualified to look after them, usually in a store. Books are changed once a month. Those in charge bear the expense of

putting in shelves and are paid on the basis of circulation. At Grand Crossing a millinery store is used and at Brighton a stationery store. This method is especially applicable to the outlying districts of a great city.

"He who runs may read" to-day.

Chicago leads other public libraries in its delivery vehicles. In 1904 the first motor wagon was installed with such success that others followed promptly. The first three machines displaced six horse wagons. As new branch delivery stations multiplied, other trucks were added. There are now six of them delivering books daily to 150 stations, each motor wagon making an average day's trip of forty-two miles. The capacity of the wagon is 2500 pounds. The first three machines in their first year of service only saved \$100 over the cost of horses, the expense running up to \$6671. Now the six trucks are operated for less than \$5000. Each motor handles nearly 600 books a day, the entire fleet delivering over 1,000,000 volumes a year. Eighty volumes can be put into a trunk, thirty of which fill the body of the machine. In ten years of service the six motors have traveled over 750,000 miles. The parcels post is found to be an economical aid.

Mr. Bostwick, of the St. Louis Public Library, says its purpose is to send a collection of books wherever it is wanted, the only limitation being a desirable person to administer the neighborhood library.

MUNICIPAL REFERENCE LIBRARIES

One of the most significant links between the library and the city is the municipal reference library, of which there were seventeen in 1914.¹ In these days of municipal research there is no institution that can serve the city so directly and fully as the public library. It is almost essential that the service given to city officials and municipal students should be differentiated from that offered the usual patron of the library. The library cannot divert its general staff from the service of the average citizen to give the necessary time to minute investigations of such subjects as city charters, lighting and water rates, city planning, grade crossings and terminals, fire, police and health

¹ For a list of municipal reference libraries see Appendix 3.

departments, home rule, street paving, street railways and franchises, industrial and vocational education, and the ramifying subjects that bewilder the statesman and investigator to-day.

Baltimore established a department of legislative reference by an act of legislature and it began operation January 1, 1907. An advisory board was created consisting of the mayor, the city solicitor, the presidents of Johns Hopkins University and of the Merchants and Manufacturers' Association. They opened the first municipal reference library in the City Hall. The Municipal Reference Library of Cincinnati has been similarly established.

The municipal reference library is the foe of provincialism.

The Baltimore and Cincinnati libraries are not under the general library administration, as are the other municipal reference departments. The latter are generally located in the city hall, in charge of the expert administration of the public library. The Chicago Municipal Reference Library may serve as a type of this new institution. The library issues bulletins for public information, drawing upon the collection of reports and documents on its shelves. The bulletins issued have covered such subjects as "The Rates of Fare of Public Motor Vehicles in Fifteen Large Cities," "Municipal Dance Halls," and "Municipal Markets." The library not only furnishes bound volumes to citizens, as well as to public officials, but is very generous with clippings and other ephemeral but also invaluable material. The way in which the library may serve unsophisticated officials is indicated by a letter the Librarian, Mr. Frederick Rex, addressed to the Council of Chicago:

"The function of the Municipal Reference Library is to provide, arrange, and render readily available for the use of the Chicago City Council and its various committees, information, public reports and data bearing upon the legislative projects before them. We have a very complete Library on municipal government, containing among many other things the annual reports, ordinances and laws of other cities.

"A card index is kept in our Library of the subject matter of these documents, and it is our aim to analyze and prepare this material so that it may be easily available.

"We desire to make such material as we have collected or may collect of the utmost use to you and want you to call upon us for any aid we can give.

"As the City Council has adjourned for the Summer months we would suggest that you inform us now of any subject which you wish investigated.

We will thus have plenty of time to collect the information desired so that we can place the complete data in your hands when the City Council reconvenes early in October. We will tell you:

"First: What cities have passed ordinances or taken action upon any particular subject.

"Second: Where similar ordinances are pending or under discussion.

"Third: Where valuable discussions upon any subject may be obtained.

"Fourth: At your request we will write a report upon any subject indicated."

The New York Public Library, through its Library School, announces a Municipal Reference Course, open to graduates of library schools. Courses are given on municipal reference library administration, the organization of the city government, city problems, municipal bibliography, municipal finance, health and vital statistics, supplemented by short courses and single lectures by municipal officials. Lectures, seminars, and field work are included in the curriculum.

The public library is becoming more obviously municipal.

LIBRARY AND SCHOOL COÖPERATION

The library is too often looked upon as an institution disconnected with the system of public education. Coöperation between the library and the school was begun in Worcester in 1880. Within two years the movement had reached Indianapolis and Chicago. The children's rooms have done much to train children in the use of the library, before they are graduated from school, but coöperation has become very much more elaborate since 1880.¹

¹ Mr. Legler of the Chicago Public Library indicates eleven methods of coöperation between the public library and the public schools:

1. Classroom libraries are sent for local use and home circulation.
2. Deposit collections are lent for periods varying from one semester to a full scholastic year.
3. Classes are invited to visit the library for instruction in reference work.
4. Reference lists corresponding to the outlines of history or other school studies are posted for easy reference and groups of books are placed on reserve shelves for like purposes.
5. Story hours planned in conjunction with teachers are conducted.
6. References are looked up for teachers in anticipation of study assignments.
7. Collateral reading is provided.
8. Leaflets are used listing library resources in aid of teachers.
9. Trained librarians are placed in charge of high school libraries and give instruction in the use and care of books.

When the Buffalo Library was municipalized coöperation was at once begun between the library and the schools. Ten schools were chosen to give all of their books to the library if the latter would supply the schools with suitable books equal to the number of children. This selection is renewed twice a year so that the books may be kept in condition by experts. The schools also surrendered their city-state fund for books to the library. No cards are used and all children must have access to the books; they may not be used for reward or punishment. In 1898 over 27 thousand books circulated from 163 classrooms. In 1911 the circulation had grown to 440 thousand, of which prose fiction embraced less than half; the classrooms served numbered 861.

The child graduating from school is invited by the librarian not to graduate from the library.

All of the books used in the Portland, Oregon, public schools, except text-books and certain reference books, are in charge of the Portland library. Fifty thousand volumes are in the school department. Nearly 28,000 pupils in 892 classes were visited in 1913 by the staff of the department. Each classroom from the first to the sixth is visited at least twice a year. The higher grades attend the central library for their library training. All books issued to the schools — even reference books — are for home circulation.

In February, 1894, the Public Library of Grand Rapids, while still under the control of the Board of Education, placed books in the public school buildings for circulation among the children. In the summer of 1906 six of the libraries in the public schools were open for two hours of a given day each week for the distribution of books. Several hundred additional volumes were sent there to be on deposit during the school vacation. The library also sends traveling libraries to the public, parochial, and private schools of the city for classroom work. The librarian and other members of the staff visit the schools and talk to the children about the books. The school principals send the librarian semiannually the names and addresses of children

10. "Intermediate" rooms are equipped to render the transition from the children's to the adult department of the library logical and gradual.

11. Collections of prints and photographs are furnished to illustrate subjects in geography, history and art biography.

who are leaving school. The librarian writes personal letters to these children, inviting their continuance of the use of the library.

A school branch library was opened in the Sigsbee School building on December 1, 1906. This room has an entrance from the outside and is heated separately, so that it may be used by the general public outside of school hours. It is open from 12.30 to 9 P.M. On Saturday mornings at 11 a story hour invites the attendance of parochial school children. There are now six school buildings which contain branch libraries for both adults and children.

Coöperation between the two educational authorities has made it possible to serve the public at an expense of about one cent for each person using the school branch.

Kansas City has put in the Northeast High School a branch library at a cost of \$15,000. The library is situated in the corner of the building with a main outside entrance, as well as an entrance from the schoolhouse. This library will not be confused with a children's room because the building is the seat of a social center. Men and women, as well as children, use the swimming pool and other facilities of the building. This is undoubtedly the beginning of a more economical provision of library branches since the only objection to a library in a schoolhouse is the danger that adults will regard it as a juvenile center.

If a Russian Jew goes to the school library and a native American to the social center dance, perhaps they may learn to exchange experiences.

St. Paul has sent out enough members of its library staff to visit all the grade schools. They expounded the attractions of the library and gave registration cards to those who cared to have them. Provision was also made for the seventh and eighth grades to visit the library. Conferences have been held for teachers and others interested in children's reading and story telling. This survey of the schools of the city led to the expansion of eleven school deposit stations into library centers. The service is carried on economically by volunteer pupils who carry the books back and forth, the library paying the car fare. The pupils are also extending the influence of both school and library by making their own survey of literacy in the community surrounding the schools. Statistics are being gathered of the

newspapers, magazines, and books read by the different members of the family. A more intimate coöperation with the library has been effected under the supervisor of manual training. Card trays for school library catalogues, bulletin boards, library shelving, and other library furniture are now being made in that department.

How many library patrons pay their way?

The most striking example of coöperation between the school and the library in civic education is in Newark, New Jersey, where a text-book, "Newark City," is made the basis of a study of the community. This was published in 1892 as a result of the accumulation of municipal information by the librarians aided by teachers. Mr. Dana, the librarian, regards this as the most valuable contribution to municipal welfare that the library has made. The Chicago Public Library furnishes package libraries for the use of civics classes, promoted by the Civics Extension Committee and the Association of Commerce.

The work of the public library is, of course, supplemented by separate school libraries. There has been a very remarkable development of high school libraries in the last twenty years. Some of these are under the supervision of the public library.¹

PUBLICITY AND PROPAGANDA

Having secured a comprehensive collection of books, it becomes necessary to create an interest. There is what may be called legitimate advertising outside the library. It is not unusual for a library to publish lists of books in the newspapers when any important new accessions are received or when some subject of special interest is before the public, as in the case of a lecture course, convention, or some national or international event of popular interest. Placards and posters are often put up in schools, hotels, and other public places. Within the library there is always provision for bulletins, which furnish the opportunity for the special announcements of the library, but are also used for disseminating valuable information which will indirectly contribute to the circulation of books. Exhibits are sometimes held of arts, industries, or sciences, especially when the library is housed, as is often the case, in the same building

¹ See Appendix 4 for types of high school libraries.

with an art gallery or a museum. Some of the smaller libraries provide various forms of entertainment and instruction for the children, having only a remote connection with the primary function of the library, but with the expectation that the cultivation of an interest in the institution will lead to its proper use.¹

It pays to advertise among borrowers as well as buyers.

The 125th Street Branch of the New York Public Library mails postal cards to patrons advising them of the advent of a new book and stating that it will be reserved until 9 P.M. on that day. It also notifies them to leave word indicating the subjects in which they are interested. The Queensborough library in Greater New York, the Portland, Oregon, library and others have lantern slides made which they persuade the movie managers to show, inviting attention to books related to the films.

A new branch library in Rochester, New York, uses show windows to display inviting books.

Grand Rapids, Jacksonville, and other cities have printed a selected list of books on the care of children, entitled "Better Babies." This is mailed to the new mothers as their names appear in the official record of births. Grand Rapids also posts a series of photographs of babies whose mothers have raised them on the library books. These prove to be as fitting advertisements as any put forth by commercial purveyors of infants' foods. The children's librarian in this city interests mothers by attending all sorts of mothers' meetings and women's clubs. She is also adviser in the selection of story films for the children's movies.

The modern library is essentially a missionary enterprise.

Most of the Carnegie libraries of the country and libraries generally in smaller cities contain an auditorium. This invites their use for lectures, and they frequently become the headquarters of the university extension center. The Providence Free Library was a pioneer in an effort, which many libraries now make, to meet the needs of university extension students, not only through caring for the traveling libraries which are sent with the lecture courses, but gathering special books and magazines from their own stock, and frequently purchasing books which are in demand. The Pittsburgh library not only duplicates the university extension traveling library sent to it, but

¹ See Appendix 5 for bibliographies of children's books.

provides virtually every book and pamphlet mentioned in the syllabus, and makes special announcement for each one of the many lectures given in the hall.

The library of Portland, Oregon, has for several years been using the auditoriums of its branches for lectures and social-center meetings. The first year the East Portland branch was opened (1912) 65 lectures were given with an attendance of over 11,000, and 45 clubs met in the committee room. The central library, completed in 1913, contains a hall seating 412 people. It is equipped with moving-picture machine and stereopticon. There are also several smaller lecture rooms. For the year ending October 31, 1914, 1584 lectures and meetings were held in the Portland central library building with an attendance of 94,000.

The Rosenberg Library, Galveston, Texas, has a lecture fund given by the founder of the library. In ten years a hundred lecturers have delivered two hundred lectures to a total attendance of 85,000. The subjects range over most of the departments of knowledge recognized on the shelves of the library.

The Newark, New Jersey, library made provision for over 6000 meetings in the library in 1912 with a total attendance of 190,000.

THE LIBRARIAN

The librarian of to-day is no longer the mere scholar of the past. He may be a scholar, but he must be an administrator. So complicated an institution as the main library, with its many departments and relations to a multiplicity of outside institutions, with its large staff of employees, and its important financial processes, requires a high degree of executive ability. The New York Public Library has a thousand persons on its staff. Mr. Herbert Putnam says:

"The American librarian (unlike certain of his brethren abroad or of an era past) recognizes no equality in methods which are different. Either his method is better than his neighbor's, or worse. In the one case he must convince his neighbor; in the other he must convince himself. But an effort to convince there must be. So he has formed Associations, with conferences whose purpose is comparison of experience and the discussion of possible improvements in method."

The trained assistants furnished by the library schools of to-day share with the librarian of executive ability the honor of increasing the utility of this great democratic educational institution. There are now eleven professional library schools, offering courses of from one to three years each.

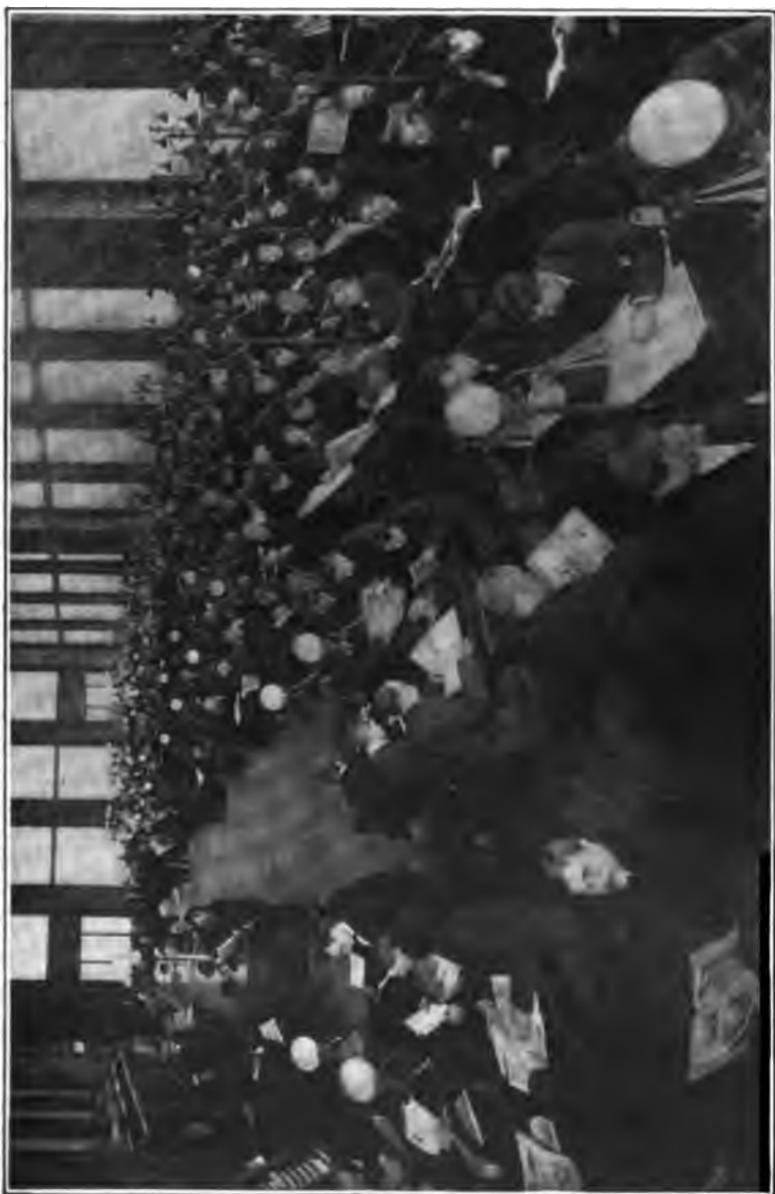
Elsewhere are many library classes. The Cleveland Public Library, for instance, conducts a summer school, in which its own attendants and candidates for positions secure preliminary or added training. The Training School for Children's Librarians at Pittsburgh co-operates with the Kindergarten College. A fee of \$50 a year and the time given to apprentice work reimburse the library for the lectures and classes, while a special class of library assistants is being prepared to care for the growing work with children. Many libraries give training to library assistants as a means of securing the needed workers, which its finances would not otherwise permit. These students usually spend a year, which is recognized to be only preliminary to the subsequent specialized training of one of the professional schools. To make a small library successful to-day, it becomes almost indispensable for the librarian to conduct a training class.

While emphasis must of necessity be laid upon books in the library, as it need not be in the modern school, the new spirit demands that the library should be made for man and not man for the library. The library is being made not only for man but for men. In St. Louis the librarian observes that over 75 per cent of the users of the open shelves are men. The men, and women too, have a right to resent being treated as children. The Chicago librarian says:

"If the subjects of religion and family ties and the sacred obligations of life are treated with contempt, or flippancy or cynicism, that book is undesirable. On the other hand, there are books which deal with the sex relations of men and women as pages from life, without reserve, but which have a sureness of touch and intellectual grip that make them more moral than some of the spineless novels whose false conceptions of life and counterfeit ideals warp character inconceivably more than a portrayal of sex delinquency."

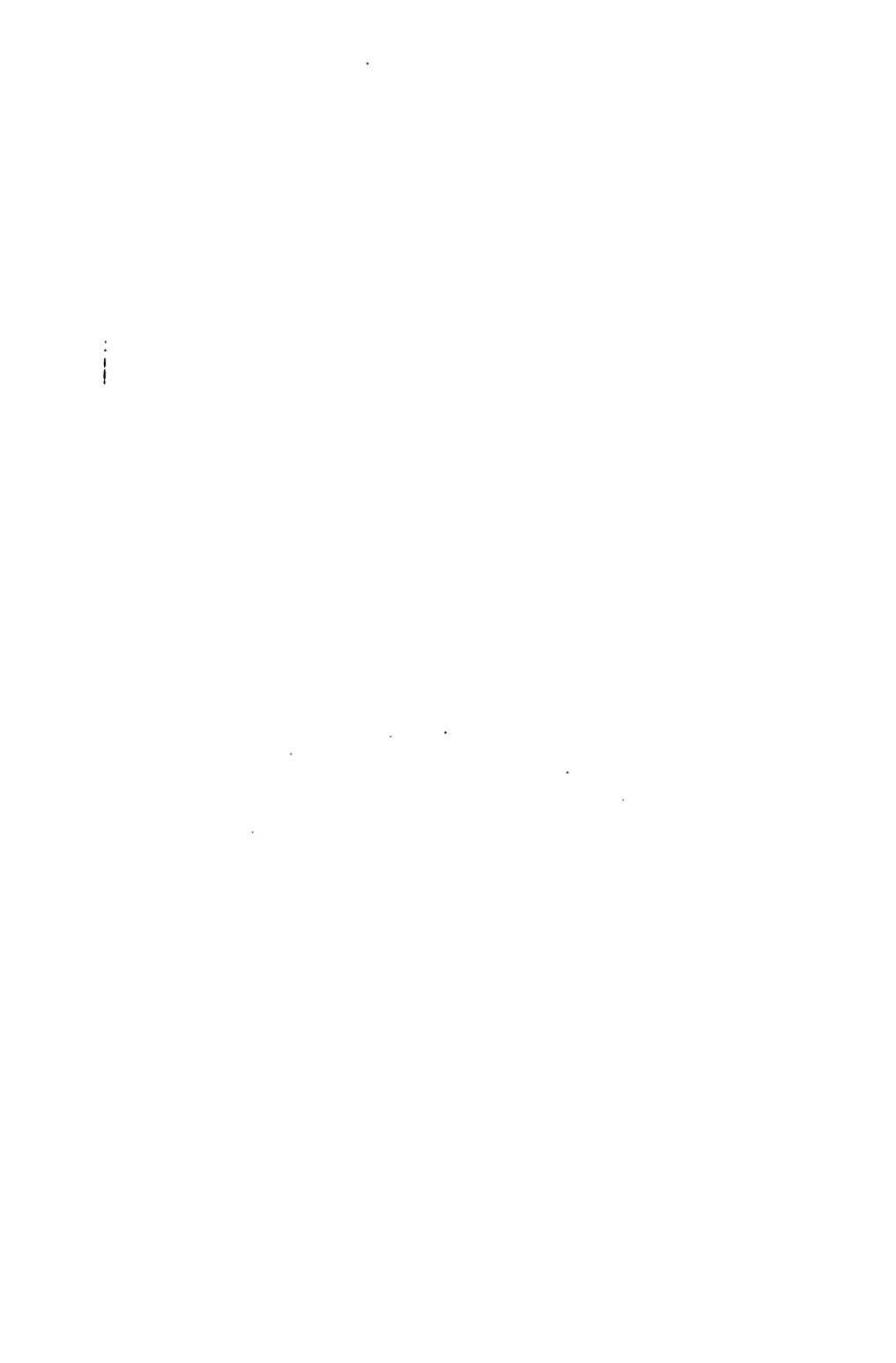
In Portland, Oregon, radical periodicals are restricted only by the limited funds of the library, though papers obnoxious to certain elements of the community are not flaunted in their faces.

It is the privilege of the public librarian to provide milk for babes and meat for grown men.



Courtesy of Mr. Henry E. Lester, Librarian.

READING ROOM, CHICAGO PUBLIC LIBRARY.



MUSEUMS

A museum is a graphic library. If it were not for our dependence upon the printed page museums might rival libraries in popular interest and support. As it is, museums are just emerging from the stage represented by the old library of scholars. Art museums have been few in American cities and they have been maintained almost exclusively for "art lovers," who were supposed to be willing to pay their way. Scientific museums have been less exclusive but more pedantic. The public has been welcome, but must be qualified to enjoy the exhibits. The art museums of New York, Pittsburgh, and Chicago have been growing increasingly popular. Their scope has been broadening; their sense of responsibility to the uninitiated deepening. Art galleries are usually not municipal in the sense that libraries are, but the Philadelphia Museum belongs to the city.¹ The museums of Philadelphia and Boston have been growing richer in collections and annual exhibits, but have been remiss in encouraging American art. Boston has a better Japanese than American collection.

Art is jealously guarded from the profane in the Hub.

The Metropolitan Museum in New York contains by far the greatest art collection in America, but its use is not comparable to that of the Art Institute in Chicago. Organized in 1879, the latter is only ten years younger than the Metropolitan. Its services to the populace and to American art far outstrip those of its wealthier rival. The Friends of American Art have given the Art Institute the best collection by American artists. A gallery is set apart for a continuous exhibition of American paintings and sculpture. There are also periodical exhibits of architecture and craftsmanship. It is the only art museum in America, if not in the world, that is open free Sunday evenings as well as Sunday afternoons. Courses of lectures and meetings of art organizations, as well as the local school of art, use Fullerton Hall — the auditorium — and the Ryerson Art Library constantly.

Art for the people and by the people in Chicago!

¹ Cities which boast of notable art galleries are Boston, New York, Washington, Chicago, Philadelphia, Pittsburgh, Providence, Springfield (Massachusetts), Worcester, Buffalo, Toledo, Milwaukee, Saint Louis, Syracuse, and Minneapolis.

Serviceable as the Chicago Art Institute is, it is outstripped by the beautiful little museum in Toledo, that, in proportion to the population to be served, is the most popular in America. Worcester has a \$3,000,000 endowment for its art museum. Cleveland has a charming building in Wade Park. The Art Museums of Buffalo and Saint Louis are similarly located. The St. Louis building is a perquisite of the St. Louis Exposition and so far from being deserted because of its remoteness from the center of population, the patronage is far beyond that of the old centrally located museum.

The helplessness of the average visitor is relieved in Boston, New York, and Chicago by the guidance of docents.

Among the cities which have museums in connection with the library are Woburn (Massachusetts), Milwaukee, Dayton, and Newark (New Jersey). Important museums of natural history may be found in New York, Philadelphia, Chicago, and Davenport. The most pretentious of these is the Natural History Museum,¹ west of Central Park in New York, the extensive grounds and buildings of which belong to the city, while the trustees, the city, and private subscriptions provide the funds. The Field Columbian Museum, in Jackson Park, Chicago, has a more modest counterpart in the Academy of Natural Sciences in Lincoln Park on the North Side, and is destined soon to have itself a more convenient and magnificent edifice in Grant Park. Among the smaller cities of the country, Davenport stands conspicuous as having an unusually large and fine collection of natural history specimens housed in a special building, which has long since proved so inadequate as to necessitate an annex in the form of a large structure formerly used as a church, at least twice the size of the original building.

A museum can be made as vital to-day as a zoölogical garden.

CHILDREN'S MUSEUMS

In addition to the coöperation of school and museum, the children's needs are being met by children's museums. The pioneer is the branch of the Brooklyn Institute of Arts and Sciences, established in 1899. The city has erected a new building at a cost of \$175,000 for this museum. It enjoys an attendance

¹ See p. 206.

of over 100,000 a year. The venerable Smithsonian Institution in Washington has a children's room.

The director of the museum at St. Johnsbury, Vermont, became the curator of the Children's Museum in Boston. Miss Delia I. Griffin represents in the museum world the type of educator that is found at the head of our most democratic libraries. The museum is to her a focal point for all outdoors. Birds, beasts, and flowers studied on excursions are the excuse for tolerating the collections of the museum. The wonderful groupings of stuffed animals to be seen at the American Museum of Natural History are more than rivaled by the living discoveries of these juvenile museum patrons. The Boston Children's Museum is happily located in Jamaica Plain within range of the natural beauties and wonders of Franklin Park and the Arnold Arboretum.

When children have learned to read the book of Nature, the library and the museum will be one.

CHAPTER XIV

SOCIAL CENTERS

It is not often that a new municipal function owes its inception and development to one man. Colonel Waring's name occurs to any one who is familiar with street cleaning in America. Dr. Henry M. Leipziger is the father of the free lecture movement. William A. Wirt is responsible for the all-day all-year school. These are all revolutionary expressions of older municipal activities. Edward J. Ward is the evangelist of a new medium of municipal life—the social center. The old village schoolhouse was a center of life in the community in the days when the community was self-centered. Since urban life began to be complicated and disintegrated there has been no such focus of its social life. For twenty years people have been groping toward the organization of the neighborhood. Schoolhouses have been used for night schools, but that is in harmony with the idea that their purpose is to serve those who have not been graduated.

When young people have left school, they have left it finally, and too often gladly.

FREE LECTURES

Before the larger use of the schoolhouse had been conceived a free lecture course was established in New York City in 1888. During the first season 186 lectures were given at six centers, the attendance being 22,000. When Dr. Henry M. Leipziger took charge of the system in 1890 there was an immediate advance so that 78,000 people attended the lectures in the following season. For the year closing May 1, 1913, Dr. Leipziger reports over 700 lecturers speaking on nearly 1800 topics before 5000 audiences at 172 lecture centers. The total attendance was 1,138,702. The range of subjects is bewildering, including especially literature, history, sociology, art, general and applied

science, descriptive geography, and lectures in Italian, Yiddish and German. This system has been developed with very inadequate funds and with caution, due to the prejudice against the consideration of religious and political questions. In the first instance these lectures have had to be popular and for the most part illustrated by lantern slides. The public has been trained in New York by Dr. Leipziger's wise pedagogy so that they have gone on from stereopticon lectures to those without illustrations, from single lectures to courses, until it has been possible to give a course of twenty-eight lectures with collateral reading and examination. The report for 1913 says:

"It is a perfectly logical step, from these weekly discussions on subjects relating to government to neighborhood meetings to consider local, state and national affairs, to meet the local or municipal officials to discuss city conditions, and then to have political meetings in these schoolhouses. The Board of Education sympathizes with this new use of the schools, for last fall, with its sanction, the schoolhouses were placed at the disposal of the great political parties. Many feared that this would be a dangerous step, but, on the contrary, it proved to be one of the most progressive and fitting uses of the schoolhouse."

Other cities have followed the lead of New York, notably Milwaukee, from which the free lecture movement spread to Wisconsin through the University Extension Department of the State University.

Free lecture auditors are not under the compulsory school law.

It has been the practice for cities to permit the schoolhouse to be used as a lecture center, especially in the large number of cities that possess high school auditoriums. These lectures have generally been conducted by teachers' associations or women's clubs and have been supported by the patrons. Free lectures, paid for by the taxpayers, have been less general, but in many places have constituted, as in New York, the bridge from the hermetically-sealed schoolhouse to the social center. The intellectual atmosphere of the historical American schoolhouse is like the air that the Health Commissioner of Indiana said he found in some of their oldest buildings, that must have been built in originally.

The ventilation of the educational system has accompanied the illumination of the public schoolhouse for free lectures and of the public by free lectures.

It is contended that the public lecture system, now in existence for a quarter of a century, has resulted in — “(1) continuation of systematic study, (2) Americanization of immigrants, (3) improvement of sanitation and health, (4) increased interest in the city’s government, (5) the formation of people’s forums for discussion of social and economic questions, (6) greater efficiency and earning power, (7) appreciation of art and science museums, (8) improved reading taste of the public, (9) wider and larger interest in the finer things of life.” It has been still more remarkable in persuading men to attend lectures. Whether because they are free or in a public building the percentage of men in attendance is much higher than at other serious lectures.

The idea of school extension was borrowed from the English university extension movement. While the latter has flourished in some parts of America, its most popular fruits are found in the American school extension movement, in which New York leads.

CHICAGO SCHOOL EXTENSION

The vacation school movement in Chicago, promoted by the Playground Committee of the Women’s Clubs, indicated the necessity of the wider use of the schools, and a vacation school committee was appointed in 1898. As these voluntarily supported vacation schools began to reveal the possibilities of the schoolhouse, a school extension committee was organized at the beginning of the twentieth century to agitate for what is now known as the social center. Legislative restrictions hampered the work in Chicago until 1911.

With twenty-five millions invested in school property, Chicago had to ask the citizens of Southern, Central and Northern Illinois through their legislative representatives for permission to use its own schoolhouses.

Meanwhile, a local newspaper conducted free lectures, but recreation centers were not opened by the Board of Education until 1911. In 1913 Chicago had twenty-four social centers. In spite of the slow development of the social center, Chicago has benefited by a private organization, which has endeavored to correlate the educational and social facilities of the city. The Council for Library and Museum Extension, organized to give publicity to Chicago’s educational opportunities, issues a

monthly bulletin indicating the daily lectures and entertainments, exhibitions and conventions. It tells of the work of the Municipal Reference Library and the other libraries, public and private, of the city. It records the evening schools and social centers and the work of the park commissions. It announces the exhibits of the Art Institute and the Scientific and Historical Societies. It gives notice of all the private, commercial, and educational enterprises that have cultural and social value in the city and the suburbs. There is thus furnished a remarkable perspective of educational opportunities that are becoming increasingly public.

This comprehensive bulletin of educational facilities is Chicago's substitute for the commercial advertisement of "What is Going on" in other cities.

ROCHESTER SOCIAL CENTERS

Neither New York nor Chicago is responsible for the first full-fledged social center. Rochester proposed the social center under that designation at a joint meeting of the school extension committee and the board of education July 5, 1907. A meeting had been held on February 15 of the same year, at which delegates from organizations representing 50,000 people met in the Chamber of Commerce and requested the mayor and council to appropriate \$5000 for social-center development.¹ The following autumn the initial steps were taken in Public Schoolhouse 14, where a neighborhood gathering was held on November 1. There were twelve men present, which was perhaps auspicious in view of the fact that it was a Friday evening! The potential constituency of the group was declared to be the electorate of the district. Among the officers chosen was a conservative republican, a physician (who was also elder in a Presbyterian Church), a Jewish Socialist tailor, a union printer, and a bank director. At the next meeting "The Duties of an

¹ It was decided that "the Social Center should provide opportunity for physical activity, by means of gymnasium equipment and direction, baths, etc., opportunities for recreation, in addition to those which the gymnasium would offer, by the provision of various innocent table games; opportunities for intellectual activity by the provision of a library and reading room and by the giving of a lecture or entertainment at least once each week; while the essentially democratic, intimately social service of the Centers should be gained through the opportunities offered for the organization of self-governing clubs of men, of women, of boys and girls."

"Alderman" were expounded by the local representative to the 57 auditors. Other public questions were considered, the attendance grew, and demands came from other parts of the city for the use of schoolhouses. During that season seventy-two meetings were held to discuss a range of topics so wide that no faction had yet considered any limitation on their scope.

The new Declaration of Independence proposed education of the people, by the people, for the people.

The men of the different neighborhood organizations gathered at the original center for a banquet at the close of the first season. Women were received into the privileges of full membership at the same time. During the year they had been having the opportunity of meeting among themselves in the schoolhouses, but not of taking part in the deliberative assembly. The first year the appropriation was not large enough to provide recreation for young people. The success of the men's gatherings led to an appropriation of \$10,000 for social centers as now understood. Sixteen schools were used as neighborhood club houses, open not only evenings, but Sunday afternoons, at the request of the Ministers' Association. A city-wide League of Civic Clubs crowned the second season's work.

Rochester discovered that its citizens could be neighbors.

The third season more than \$20,000 was appropriated for the use of eighteen school buildings. It was in this third season that the social center began to be defined in all its amplitude. The Rochester Dental Association coöperated in opening the first dental clinic in a schoolhouse. The Rochester Art Club coöperated in the inauguration of an art gallery in a schoolhouse. A Health Department official opened a local health office in a schoolhouse. A vocational bureau and an employment bureau were inaugurated. While the schoolhouse began to be a place of meeting for clubs of all kinds, it was more conspicuous in its use by organizations putting no restriction upon membership or attendance. Young and old gathered for serious and diverting entertainment week day and Sunday in the common schoolhouse. Discrimination was made in favor of those who did not use the schoolhouses in the daytime, and their prompt attendance showed that the superstitious limitation of the school to little children was rapidly dissipated.

Three evenings a week were given to men and boys and two

to women and girls. One evening each week was set apart for a general neighborhood gathering of both sexes and all ages for which lectures or entertainments were provided.

As contrasted with subsequent social centers, the facilities of the original building were largely improvised. The assembly hall was equipped as a gymnasium. Since shower baths could not be installed there, they were put in on the ground floor in connection with the cloak room of the kindergarten. Tables and table games were procured for a social room. A stereopticon lantern was included. A library of five hundred volumes was borrowed from Albany and popular periodicals were added. Dishes were bought that the clubs might serve refreshments. The success of the social center under these tentative circumstances was spectacular. In addition to the director, a woman was appointed to supervise the women's and girls' activities and a man to have charge of the boys. The woman at this first social center entered so fully into her new occupation that she made five hundred calls in the neighborhood. In addition to these officers, there was a librarian who also guided the table games, a gymnasium director for men and boys, and a woman gymnasium director with assistant pianist. A doorkeeper was also necessary and a janitor on account of the large patronage that immediately responded to the opening of the social center.

The taxpayers discovered that the schools were theirs.

As the people became acquainted with the purpose of the center, their activities ramified. Civic clubs discussed economic and public questions; boys and girls organized debating and athletic clubs; and foreigners gathered in organizations in which they could retain their native tongue. At the close of a concert given by an Italian club, one of the members said, "Here, for the first time, I find realized the dream of what America would be, which I dreamed while in Italy."

One of the results of the intimate acquaintance and free discussion of the Rochester social centers was to make the radicals, who promptly seized them for propaganda, more temperate as they came to understand diverging views. Another result was to make the conservatives suspicious of any movement that gave in the school opportunities for free speech. Sinister influences struck at the social center through its budget. The

endeavor to cripple the work was met by floods of petitions and resolutions, but the appropriation was cut. Thereupon every person employed in social-center service volunteered to go on with the work without compensation.

The right hand of fellowship cannot build the temple of democracy without the tools.

A NATION-WIDE MOVEMENT

The extraordinary success of the Rochester social centers in inaugurating a nation-wide movement was due primarily to Edward J. Ward, who was called from there as a missionary to the state of Wisconsin, through its popular university. Rochester's loss was Wisconsin's gain. That pioneering state passed a law in 1911 authorizing school authorities to grant the use of schools and public buildings for public meetings of all kinds on petition of one-half the voters of the district. At Belleville in 1914 the Methodist minister was elected president of the community center upon motion of the Catholic priest. Seventy-two Wisconsin cities and towns used their schoolhouses as polling places in 1914. Twenty thousand community assemblies were held in their school buildings. Nearly two hundred men and women were employed by the school boards to direct social-center work. Other states have followed, culminating in California. The California law establishes a social center at every schoolhouse in the state, providing free care of the building and a supervising officer out of the local school funds. No charge is made for the use of the property unless by an organization demanding an admission fee.

New York, Wisconsin, California — an ascending scale!

The growth of the social-center movement is indicated by Clarence Arthur Perry, who states that there were 126 cities reporting boards of education that provided heat, light and janitor service in 1912-1913. Seventy-one cities reported nearly 21,000 paid workers.¹ Over 500 schoolhouses were used for polling places, nearly 500 for political meetings, over 300 for exhibits and over 600 for motion pictures.

¹ The list of cities employing paid workers in 1912-1913 is given in Appendix 1.

RECREATION CENTERS

Next in interest to the extended patronage of the schoolhouse is the number of activities to which it is being devoted. The evolution of the social center has developed thus far the following functions: a lecture center, a recreation center, a parents' center, a local art gallery, a branch public library,¹ a motion-picture theater, a political forum, a polling place, a civic secretary's office, and an employment agency. It was logical and easy for the lecture center to grow into a place of recreation, providing for debates, dramatics, music, dancing, civic, literary and home-making clubs, and athletics. The schoolhouse is usually the headquarters of these social centers, but there must be added to school buildings other public places suitable for larger social uses.

The functions of the social center were elaborated in response to the neighborhood needs and in harmony with the equipment of the schoolhouses. In addition to an elaborate program of free lectures in Brooklyn, a small committee of citizens secured the Commercial High School for a series of free concerts and lectures on Sunday evenings. High class musical programs alternated with lectures on social and civic subjects. The attendance at the concerts averaged 1500 and at the lectures about half as many. Collections taken up at the performances amounted to two-thirds of the total expenses.

Support by the patrons, if not imperative, is encouraging.

The social center in Cincinnati began logically as an outgrowth of the children's curriculum by opening gymnasiums for those of both sexes who are over school age. The sexes use the gymnasiums on alternate evenings. The school swimming pools are open to the public in the evening and a free choral class has been organized under the supervisor of music. Cincinnati also conducts free lectures, but does not make special provision for free discussion of public questions. The refusal of the library and school boards to allow the auditoriums in the buildings under their administration to be used for public discussion incited the movement for the revision of the constitution of Ohio. This radical document emanated from the Constitutional Convention of which Herbert Bigelow was president.

¹ See pp. 244, 245.

He and Frank Parker Stockbridge had tried to organize the Town Meeting Society in Cincinnati, and the suppression of free speech has quite properly given Ohio one of the best constitutions in the country. Thus the educational authorities of Cincinnati innocently promoted a great democratic movement, as did the authorities of Rochester when Mr. Ward's energies were released for the benefit of Wisconsin.

A wise engineer is grateful for the safety valve.

The growth of the social center in Boston has been due to the same kind of influences that have given rise to it elsewhere. The Women's Municipal League established a neighborhood center in the East Boston High School. The enterprise was wisely inaugurated by a couple of skilled social workers taking up residence in the neighborhood. This meant three months spent in getting acquainted with neighbors before opening the school. The results of these intensive labors were legislation by the state authorizing the larger use of public school property and the organization of seven social centers in Boston under the direction of an experienced worker. A woman and a man are put in charge of each one of these centers under the general supervision of the director. The centers are open Wednesday, Friday and Saturday evenings. In addition to recreation, courses of lectures are given. The centers are to be linked together by debates and general concerts. The organization is to be as far as possible self-governing through a local council. Lectures provided in 1914-1915 were delivered not only in English, but in Polish, Lithuanian, Italian, and Yiddish.

There is no confusion of tongues where all speak the language of neighborliness.

Grand Rapids employs a supervisor of social centers who not only directs the six centers in grade schools, but has charge of the boys' athletics and playgrounds. The activities include choruses, gymnastics, sewing classes for mothers, dramatics, minstrel shows, boxing matches, debating societies, illustrated lectures and motion pictures. The social-center year lasts five months. Kansas City has opened centers in seventeen buildings, and Milwaukee has voted by referendum over \$80,000 for one year's social-center work through a two-tenths of a mill tax. Eight Milwaukee social centers include pool and billiard tables in their equipment.



VOTING IN A FIELD HOUSE, LOS ANGELES.



Photograph by A. L. Cross.

POOL ROOM IN FOREST HOME AVENUE SOCIAL CENTER, MILWAUKEE,
WISCONSIN.



A school in Beverly, Massachusetts, possesses a bowling alley.

At first the school boards reluctantly permitted the use of the schoolhouses upon payment of all expenses. The tendency now is to open the buildings free. After an agitation extending over years the Board of Education of St. Louis has ruled to permit the use of the school buildings for civic, recreational, and educational purposes free, charging fees only when they are used for amusements or entertainments, including dancing. This interpretation means that the school yards, shower baths, and playrooms are open without charge.

Life becomes freer as the interests multiply that can be paid for out of the common fund.

PARENTS' CENTERS

Mothers' clubs are being organized throughout the country and in many instances these have led to parents' clubs. Some of these organizations merely take an academic interest in the children's education. Some help to organize social centers, while others have been recognized as having an organic relation to the school system. In Birmingham, Alabama, there is a school improvement association, a voluntary organization of parents in each school district, whose function it is to administer the social centers. The schoolhouses may be used for entertainments, lectures, civic league meetings, playground associations, boys' clubs, debating societies, and other entertainments which are authorized by the School Improvement Association in coöperation with the principal. These associations have promoted school decoration, school libraries, and kindergartens. They provide the school lunches, furnish pianos and talking machines, and provide playground equipment and supervision. The local associations are federated in a Central Association, meeting twice a year to discuss their common functions.

The Parent-Teachers' Associations of Kansas City share with the Mother's Congress and the Department of Public Welfare the responsibility for the social-center meetings in the schoolhouses. These associations held 407 meetings in 1913-1914, fifty-nine of the schools having such associations.

It must cheer the children to have this triumvirate — mother, father, teacher — back in school again.

ART CENTERS

The schoolhouse is becoming an art center for the community, as well as for the children. The Chicago Society of Artists, which has been much more public spirited than most local organizations, circulates a traveling loan collection of original paintings so that children and others are not compelled to go to the Art Institute, at least to see the products of local talent. The Washington Irving High School, New York, has used its broad corridors for loan art exhibits. It is estimated that as many as 12,000 visitors have passed through these improvised galleries in a week. New York has also experimented in programs of classic music by gifted performers to the children and parents in the school auditoriums. Similar encouragement has been given to the classic drama by the coöperation of the Wage-earners' Theater League and the Children's Theater with the Department of Education. The Ben Greet Company has given performances in the high school auditoriums, the expense being met by a uniform admission fee of ten cents. Chamber concerts are given in Boston in the auditoriums of the schools. Music is taught in Rochester social centers without charge, the pupil meeting his obligations by assisting in the public concerts. The adult public of Rochester is organized into community choruses.

Art for the people does not mean merely pictorial art or peep shows.

The most remarkable school art center and perhaps the most democratic art movement is in Richmond, Indiana. In 1897 there was organized in this small city of 25,000 inhabitants an Art Association. Mrs. Ella Bond Johnston, assisted by a few local artists, officials and citizens, gathered an exhibit to supplement the art work in the schools. This organization has continued effectively ever since then. Voluntary subscriptions of fifty cents or more secured a large membership and a wide interest. The exhibition was first held in one of the ward schools at the close of the school year. This building was transformed into a very satisfactory gallery. In addition to the works of local artists, there was gradually included a collection of pictures from the best American painters. The exhibit was not confined to painting, but included all the arts — oils, water colors, textiles,

ceramics, leather work, bookbinding, basketry, and cabinet work — any worthy craft. To these were added the work of the school art classes.

In this way a personal interest was aroused among the population that has led to a patronage of half the people of the city at the annual spring exhibition.

At the end of seven years the exhibit had become so well established that the City Council began to contribute annually \$100 from the public funds. For fourteen years the exhibits were held in the Garfield School. Prizes were offered to Richmond and Indiana artists, the awards being made by a competent jury. A former resident has provided a fund of \$500 annually for the purchase of pictures for the community.

When a new high school was to be built, Mrs. Johnston persuaded the authorities to put a gallery on the third floor. Three suitable rooms were constructed which have been handsomely and conveniently decorated and lighted. Here is housed a permanent collection and the periodical exhibits. In 1912-1913 there were shown in this museum, in addition to the Sixteenth Annual Exhibition of American Paintings and the corresponding exhibition by Indiana artists, six other exhibits, including the work of the schools. The gallery was also used for eighteen meetings of women's clubs, twenty-one receptions for clubs and schools, and twelve art lectures, as well as numerous art lessons. Over 11,000 people visited the gallery to view the collections. The art gallery is open to the public at all times when the high school building is open. As a result of this movement, the ten school buildings of Richmond are enriched by over 100 canvases and 500 reproductions. The movement has not stopped with Richmond.¹

Eve's daughters seem to maintain the discriminating precedent said to have been established by the first woman of taste.

MOTION-PICTURE THEATERS

The use of graphic methods in the schools has been appreciated by progressive educators for some time. It was inevitable

¹ Mrs. Johnston now selects paintings for important annual exhibitions in Muncie, Lafayette, Anderson, Greensburg, Bloomington, and Terre Haute, Indiana, Charleston, Rockford, and Urbana, Illinois.

that they should sooner or later appreciate the advent of motion pictures as a pedagogical device. While the films have until recently had a commercial motive, their vividness has made them unintentionally educational. As the stage presents the most realistic picture of life to the average person, so the motion picture is more striking than the illustrative material of the school. Not only are films being used in schools and for educational purposes in motion-picture houses, but films are being prepared with an educational intent. The commercial companies themselves are making films for the sake of encouraging their use in schools.

American history, literature, biology, botany and geology, as well as industrial and remedial processes have been illustrated.

There are two chief methods by which motion pictures may serve the public in an educational way. One is directly through the social center and the other indirectly in coöperation with motion-picture houses. The most extensive use of motion pictures has doubtless been made in New York and its suburbs, where liberal educational principles find commercial facilities easily available. More than one dozen schools in the Boroughs of Manhattan and the Bronx and a number in Brooklyn have been in the vanguard with some of the New Jersey suburbs.¹ Motion pictures have been shown in the East Side schools for an admission charge of three cents in competition with the commercial enterprises. The subjects are not all educational, but they are expurgated. The University of Wisconsin has been followed by the University of Kansas in buying and renting films which are sent to the cities and towns of the state for neighborhood-center use.

A motion-picture show in a schoolhouse is surely as legitimate as a church supper.

A second use of films for social purposes is in coöperation with motion-picture houses. The Drama League of Minneapolis has arranged with managers for appropriate programs. Films designed especially to instruct school children have been shown in theaters in Omaha, Louisville, Detroit, and Portland, Oregon. Frequently teachers direct the attention of their pupils to films that illustrate current subjects. A further use of films in work

¹ For cities using motion-picture films in schools and social centers, see Appendix 2.

kindred to that of the social center is found in playgrounds. In New York the Park Department coöperates with the Parks and Playground Association. Enormous audiences have viewed motion pictures in the playgrounds at night. St. Louis appropriated \$2000 in June, 1914, for the rental of films to be shown in the parks of that city.¹

If the playground is incorporated in the system of education, why not the theater?

CITIZENSHIP CENTERS

It is customary in New England to have "ward rooms" in addition to the town halls in cities of any size. These rooms are used for political rallies. It is not therefore surprising that Worcester should have used rooms in the basements of its schoolhouses for such purposes for a generation past. "The 'ward rooms' in the Worcester schools are used not alone for elections but are rented to political parties for caucuses for five dollars and to political leaders for rallies for two dollars and a half a night." Chicago began to use its schoolhouses for political discussion in the campaign that followed the extension of suffrage to women. The old custom has been revived of having candidates of the chief parties speak on the same platform. This practice, connected with the participation of both men and women, made the use of the schoolhouse in the campaign symbolic of the new civic life of Chicago.

Boston, Rochester and Philadelphia signalize the annual advent of new citizens by an appropriate celebration, lending dignity to their maturity. In Boston Faneuil Hall is used. Los Angeles accepts a certificate from the high school for a special course in lieu of court examinations. November 25, 1914, a class of twenty-one was inducted into American citizenship. New York has used a ritual prepared by Percy Mackaye in its new citizenship festival in the City College Stadium.

Much more extensive is the use of schoolhouses for polling places.² It is remarkable that the use of schoolhouses as polling

¹ For other cities using motion pictures in parks and playgrounds, see Appendix 3.

² It was claimed in *The Survey*, April 11, 1914, that 529 schoolhouses were already being used for polling places. Seventy of these were in Chicago.

places should seem strange in most American communities since they have been used from time immemorial in Pittsburgh and other places. Los Angeles and Salt Lake City adopted the method in 1911. Every schoolhouse in the latter city was used. The great spiritual significance of this simple device was appreciated and emphasized at Sauk City, Wisconsin, on election day, 1914. A Social Center Pageant was given, in which the people represented all the chief sources of the original population—Indian, French, Yankee and German. The ballot-box, draped with the American flag, was carried through the streets from the Town Hall to the public school. In the shrine of the coming citizen it was placed between the pictures of Washington and Lincoln.

The ballot-box is their ark of the covenant.

CIVIC SECRETARIES

Sauk City is also in the lead, with its neighbors, Osseo and Neillsville, Wisconsin, in creating the office of civic secretary. On June 20, 1914, the school board of Osseo voted to engage R. M. Blackmun as school principal and civic secretary at a salary one-third larger than they had been accustomed to pay for a principal.

Within a few days the school board of Sauk City voted to continue Superintendent M. T. Buckley with these added duties. The following August the State Industrial Commission recognized that these public servants were the authorized representatives of their communities to make use of the free employment service and they were appointed deputies.

The public schoolhouse is thus made the local employment agency, in addition to its other functions as a social center.

Principal Buckley says: "With this work recognized and remunerated as public service; with its administration organized and centered in the State Superintendent's office in the Capitol; and with the Bureau of Social Center Development and the other Bureaus of the Extension Division as ready sources of suggestions, material for discussion, speakers and motion-picture films, I prophesy that the people of Wisconsin will be equipped to get three times the value they have been getting out of their investment in educational equipment—and incidentally will

have in their hands the machinery for that genuine home rule which is democracy." The superintendent's office at Selma, Alabama, has been used as an employment bureau for school graduates. It also finds jobs for schoolboys after school hours.

The spectacled pedagog of earlier days is still found in musical comedies.

NEW YORK'S RECREATION CENTERS

No city has gone so far in the development of social centers as New York. It is at last able to act under a bill which provides for the use of schoolhouses and grounds for assemblies, educational and library purposes, for holding civic and recreational meetings that are open to the public, and, when authorized by the vote of the district, for holding political meetings and elections. There were in 1914 thirty-eight recreation centers in the five boroughs of Greater New York. Five of these, in outlying sections, are open only two nights in the week; the others are open six nights. The first function of the recreation center is athletics. A trained gymnast is in charge and all are encouraged to participate, so that instead of developing a few trained acrobats, all may make physical improvement. A union athletic meet, in which the chief centers compete, is held at the end of the year in one of the great armories. Only one of the centers — the High School of Commerce — offers swimming facilities, but there a competent teacher gives instruction.

New York is well equipped with public bathhouses. Swimming is not such a luxury as in some cities.

A second feature of the recreation center is the game room and library. Checkers, chess, magazines, newspapers, and fifty volumes from the Public Library are available. A third feature is the club life. Sometimes more than thirty clubs have been organized in a single center. A director, furnished by the Board of Education, gives training in parliamentary procedure and the preparation of recitations and debates. An effort is made to persuade the members of the literary clubs to take training in the gymnasium. The clubs are self-governing. In some of the recreation centers study rooms have been established, where the children of the day schools who lack proper home advantages may have adequate facilities with the assistance of teachers.

In one center only one of the two hundred children who attended the study room was not promoted at the end of the year. The children receive personal attention that it is often difficult to give in the overcrowded school. The sexes are usually segregated in these recreational centers, but mixed dancing classes have been conducted. Young men come to the young women's centers with membership cards indicating their connection with clubs at their own center.

Another feature of the recreational center is the teaching of music. Glee clubs and choruses have been organized. A bequest of Mr. Pulitzer has established a fund for giving orchestral music, and the public school auditoriums are used for these concerts.

The best known social center in New York is perhaps Public School 63 in the Borough of Manhattan, where the organizations meet all the expenses from their club dues and admission fees. This school is located on the lower East Side. The work has been assisted by a special committee of the People's Institute. The architecture of the school provides a large tiled court which makes a successful dancing floor. The Wednesday Neighborhood Club, an organization of adults, has managed the dancing in the courtyard. A dancing club was formed to meet once a week with dues of five cents. The membership has been limited to 550 to accommodate it to the space available. Through the dances the committee was able to pay over for the benefit of the center \$475 for the year.

Why dance in a dirty dance hall, when one can dance in one's own club house?

The Beethoven Musical Society has made use of this social center, and under its volunteer leadership has organized a second orchestra. The membership is made up of workers who are busy during the day, some of them so limited financially that they have to copy their music from the libraries. Concerts are given, for which an admission fee of ten cents is charged, and hundreds are turned away after the hall has reached its capacity of a thousand. A public forum is conducted, and during the Presidential campaign of 1912 the political parties held meetings at the center. To this center both sexes are admitted, and one of the results has been the formation of an Educational Dramatic League, which has conducted a class and helped to

organize ten dramatic clubs. The management of the center is in the hands of delegates from the different clubs known as the Social Center Committee of Public School 63.

Self-government gives a great deal of dignity to the social center.

The curtailment of the budget has hindered the work of recreation centers but stimulated the perfection of the community center in New York. The East Side Neighborhood Association, meeting in Public School 62 at Hester and Essex streets, has met this by a self-governing system that undertakes to supply the center's needs through voluntary subscription and participation. In the heart of the most thickly populated square mile in the world an auditorium is frequently taxed to its capacity of 2000 by those who attend the East Side Forum.

In old Greenwich Village the Greenwich Association has been organized at Public School 41. This is composed of twenty-five members, elected by those who register to vote. Nineteen organizations have sprung up in the schoolhouse. Thirty-five per cent of receipts from all entertainments goes to the commission. Members of the subsidiary organizations pay five cents a week. The Board of Education supplies a director and custodian, but the center is entirely self-governing.

OTHER SOCIAL CENTERS

A schoolhouse is the most appropriate, but not the only, meeting place for a social center. The Carnegie Library at Homestead, Pennsylvania, is equipped for a large number of social uses besides the furnishing of books. While the library circulates nearly one-quarter of a million volumes, it has a music hall attended by 34,000 people, a gymnasium and bowling alley with an attendance of 38,000, a natatorium where 56,000 baths are taken, and a billiard room where 50,000 games are played yearly. In the libraries of Memphis, Tennessee, and Virginia, Minnesota, graphophone concerts are given in connection with lantern slides or the story hour. Virginia, Minnesota, thus finds Victrola concerts gathering crowds on Sunday afternoons in one of the most desirable meeting places in the town. The Public Library of Newark, New Jersey, is almost as much a social center for the citizens as it is a distributing center for books.

Public libraries are extending their activities so that in some cities they may be said to be used now to the maximum of available time and space.¹

Many small cities are provided with rest rooms for the women that an agricultural center draws on market days. These are usually equipped and maintained by public spirited women of some club more alert to such necessities than the men or public officials. In Salisbury, North Carolina, this idea was the nucleus of an enterprise that has grown into a great Community Building. When the county built a handsome new court house the disposition of its neglected old colonial predecessor became a question. A small club of women, led by Mrs. J. P. Moore, set to work to rehabilitate this relic of a finer architectural period. The county was persuaded to spend \$10,000 on renovation. Provision was made for a beautiful auditorium, offices for the Civic Club, Daughters of the American Revolution and of the Confederacy, the county farm agent, the Industrial Club and the Merchants' Association. A crèche and rest rooms are maintained; the historical society and the public library are housed; Salisbury and Rowan County now enjoy one of the finest social centers in America.

There are other public places that may serve as social centers. Perhaps the most remarkable of these are the field houses of Chicago. Their services will be discussed in the chapter on "Public Recreation." Mr. Ward points out that \$20,000,000 have thus been expended to provide social centers, duplicating in many cases the equipment of the schools and diverting patronage from the schoolhouse.

The catholicity and neighborliness of the social center are indispensable for the organization and expression of democracy. The schoolhouse is universal and hence the logical headquarters of the social center — the neighborhood home.

¹ Portland, Oregon, Public Library, p. 247.

CHAPTER XV

PARKS AND BOULEVARDS

THE original recreation ground of the American city was the cemetery, to which friends were joyously taken as the only open and beautiful space in the community. New England towns were ordinarily provided with a common, — in some cases, like the Boston Common, large enough for recreation and even rural beauty. Southern and western country towns had a court house square. Until the end of the nineteenth century a natural park was usually an afterthought in the life of a city. Elm Park, Worcester; Bushnell Park, Hartford; Central Park, New York, were planned in 1855. The park commissioners of New York laid out Central Park in 1857 against the protests of the citizens. These commissioners of large vision were combated by people who could not comprehend why a park should be located among the rocks and the morass beyond the boundary of human habitation. There is no better named park in the world than Central Park, and with the later additions its eight hundred acres did not cost much more to acquire than New York's first three playgrounds. The costly lack of vision of New Yorkers and most other Americans is in no way more vividly exhibited than in the fact that Central Park's 840 acres cost \$6,664,500, while Mulberry Bend, Corlear's Hook, and Seward Parks — ten acres in extent — cost \$5,237,000. Philadelphia followed New York with Fairmount Park and Baltimore with Druid Hill Park, both on the confines of their respective cities, but very few other cities made important park provisions until the last decade of the nineteenth century.¹

¹ An inquiry made in 1869 revealed the fact that New York boasted of 943 acres of park space, Baltimore 585, Brooklyn 550, St. Louis 386, and Chicago 126. In forty years Manhattan's park space had grown to 1440 acres, New York's chief extensions naturally being in the outlying boroughs. Baltimore had 2401 acres, Brooklyn 1141, St. Louis 2286, and Chicago 4230. New York is still inadequately provided with parks, but Greater New York has 8000 acres.

The virtues as well as the sins of the fathers are visited upon the children.

CHICAGO'S PIONEERING

Chicago inaugurated its park system on the South Side in 1869, a referendum with a majority of two to one authorizing the issue of two million dollars in bonds. In 1914 Chicago voted \$3,800,000 to build the final link in its boulevard system, where Michigan Avenue crosses the Chicago River. This connection involves the widening of streets on both sides of the river, including the destruction of valuable business property on the South Side and the building of a two-level bridge to separate the pleasure traffic from heavy teaming. The total cost is to be more than twice the bond issue, the remainder being raised by special assessment.

Chicago is beginning to spend in 1915 for a fraction of a boulevard nearly four times as much as it appropriated for its original park system.

The history of Chicago is typical of American cities and may serve as a guide and warning to communities that have not yet made park provision. Chicago is divided like Gaul. The park system of the South Side has been developed with wisdom, except for the omission of park space in the neighborhood of the river. It now includes two large and beautiful parks, in which unusually effective work has been done on the prairie foundation, and several smaller parks which are being given the character of playgrounds. Jackson Park is widely known as the site of the World's Fair, and has an interest chiefly because of the great extent of the lake shore and the lagoons which penetrate it from the lake, giving it at one point a water stretch of a mile. A beautiful harbor shelters boats from the treacherous lake. The dominant feature of Washington Park is a great meadow.

An instructive principle applied in the Chicago park system, for cities whose topography is equally unfavorable, is the diversity which has been introduced in the several parks. The three parks on the West Side are characterized by quite different features. The southernmost, Douglas Park, contains summer swimming provisions, and an open air gymnasium and playground. Garfield Park possesses a golf course; while Humboldt Park, in the German quarter of the northwestern part of



CROWN POINT, COUNTY DRIVEWAY, PORTLAND, OREGON.
River 750 feet below.



the city, is suggestive in many of its later developments of the Fatherland. The architecture of the park offices and stables is characteristically German; the refectory is as elaborate as would be necessary to appeal to these lovers of outdoor entertainment. There are several notable statues to distinguished Germans, and great attention is given to the cultivation of flowers. Lincoln Park on the North Side contains not only the Academy of Natural Sciences and Chicago's modest zoölogical garden, but also the chief sculptural decoration of the city — St. Gaudens's "Lincoln" — at the entrance of the park.

The Chicago parks were the first to be freed from "Keep off the Grass" signs.

There is a different park commission for each side of the city, which in a measure prevents the proper extension of the parks to meet the growing necessities of Chicago, chiefly because of the unfortunately conspicuous part which politics has played in the park boards. To correct this Chicago has been given a Special Park Commission, with not very clearly defined functions, whose activities have been directed to the establishment of small parks and playgrounds and a comprehensive investigation of Chicago's needs. There are many beautiful natural tracts about the western metropolis which have been recommended for purchase by this commission, including the Skokie marshes on the north, the Desplaines River region on the west and the land bordering Calumet River and Lake on the south. These large areas are located in districts more populous than those which surrounded the present park system when it was originally planned, although some portions of them are fifteen or twenty miles from the city hall.

At the end of the nineteenth century Chicago awakened to the recognition of the fact that its park system was all on the periphery of the city.¹ This awakening led to Chicago's famous playground system. At the same time the Special Park Com-

¹ Seven hundred thousand people lived more than a mile from any large park. The most serious aspect of this was that those wards which were so deficient in park space were also those in which the houses were most crowded. The way in which one part of the city was favored at the expense of another may be best indicated by observing that the eleven wards which contained the bulk of the park and boulevard system included 1814 acres of park space, the population being about 425,000; this means 234 people to each acre of park. The remaining twenty-three wards of the city, with a population of over 1,000,000, contained 228 acres, or 4720 people to each acre of park space.

mission began an agitation for rural parks that is now being consummated. The referendums of 1914 and 1915 have provided funds to build the most important connections in the city and to annex some of the most beautiful areas outside.

Chicago will shortly outstrip the Metropolitan Park System of Boston in area and, unless New York shows some unexpected initiative, will have three times the park area of the metropolis.

What makes Chicago's experience typical is the succession of steps taken to secure a park system. Ambitious plans were made before the great fire. They were taken up with courage after the fire, but no one then understood the meaning of a comprehensive park system. The commissioners were wise enough to buy outlying areas when these could be secured cheaply and to plan connections by a boulevard system, but they omitted squares and playgrounds, where population was likely to be congested. Having allowed the growth of population to get beyond the hope of adequate park provision, Chicago met this deficiency by the most ambitious playground system in the world. Then after further years of agitation to secure the most beautiful bits of nature fronting the new metropolitan city, Chicago has moved to so secure them. It has also given to its citizens anywhere the right to establish a park district upon vote of the neighborhood, following a petition by one hundred legal voters. In less than ten years Chicago has in this way added eleven park districts, comprising 143 acres, equipped with playgrounds, and in five instances field houses, at a cost of nearly three-quarters of a million.

Chicago's park system represents an expenditure of over \$30,000,000.

Its most valuable possessions were the least expensive. Jackson Park on the South Side, where the World's Fair was held, and its companion, Washington Park, linked with it by the Midway Plaisance, cost less than New York's first three playgrounds — \$5,000,000. The whole of Chicago's South Park system, including its eighteen playgrounds — the best equipment of its kind in the world — cost less than the West Park system (\$15,800,000), its nearest rival in the playground equipment. The minor North Side system represents an original cost of less than a million dollars, although it includes Lincoln Park, the most valuable park in the city until Grant Park was redeemed from

Lake Michigan in front of the business center. In 1842 Chicago purchased from the state for \$8000 the original land for Lincoln Park, to be used as a cemetery. In 1864 the northern sixty acres were first used as a park and called Cemetery Park. The park has been enlarged, and in 1913 over \$600,000 was spent in maintenance alone.

The support of Chicago's park system costs considerably over \$2,000,000 a year at present. This includes \$100,000 spent by the Special Park Commission for conducting nineteen minor playgrounds and caring for fifty-six other pieces of ground. Chicago has already spent nearly a million and a half in securing Grant Park, a tract about the size of Boston Common, on the lake front bordering the business center. This is the beginning of Chicago's latest development that promises to give it the finest water front in the world. The inconsequential expense is due to the redemption of land by filling in the lake largely with the material drawn from Chicago's freight tunnels.

A railroad occupied Chicago's lake front, so the city moved the lake front.

SMALL PARKS OR SQUARES

The rich experience of twenty years demands that a park system include (1) small parks or squares, (2) playgrounds,¹ (3) parkways and boulevards, (4) outer parks, and (5) rural parks.

The small parks, often of historical origin, bear the most intimate relation to the active city life. The curious geometrical plan of William Penn, for the city of Philadelphia, included five small squares, determining the outline of the city, as he conceived it. All of them remain, except the central open square appropriated by the city buildings. Boston has set an illustrious example to its other New England neighbors by preserving its famous Common of forty acres, reserved since 1634, the finest open space bordering on a business district in America. Minor New England cities have their commons, but none to rival Boston's. The Green at New Haven is still a spot of comfort and peace between the business district and the college and residence sections. Southern cities frequently have a plaza

¹ See Chapter XVI.

corresponding on a smaller scale to the common, but they have often been as faithless to Spanish architectural tradition as New England has been to her heritage.

Congested Manhattan has the most significant series of historical small parks of any city in the United States.

Beginning with the Battery, which looks out upon New York Bay, at the point of division of the rivers, we find the Aquarium (taking the place of Castle Garden) and the great sea wall which forms the terminus of New York. Proceeding from the Battery to Broadway, we have scarcely left the one open space until we come to another, Bowling Green, sacred to the memory of the sportsmanlike Dutch founders of New Amsterdam, the buildings on the left side of the square marking the site of Fort Amsterdam. The railing around the circle dates from colonial days, when it used to inclose a statue of George III, torn down on the 4th of July, 1776, and melted into bullets. A little way beyond, the churchyard of Trinity gives the effect of an open space, and not much farther up Broadway we find City Hall Park. Before reaching Union Square at Fourteenth and Broadway, there is passed, a little to the left, at the beginning of Fifth Avenue, Washington Square, which with the Washington arch makes a dignified entrance to the most luxurious thoroughfare of the world. Beyond Union Square but a short distance is Madison Square, at the junction of Twenty-third Street, Fifth Avenue, and Broadway, and other little historic squares — Stuyvesant Square and Gramercy Park — lie to the east, away from the main thoroughfares. Before reaching Central Park, there is still Bryant Park, at Sixth Avenue and Forty-second Street, adjoining the site of the new public library.

The restless rush of New York's superficial currents swirl into alluring spots of shade where the still waters may run deeper.

Washington has over three hundred small open spaces generously scattered over the capital city. Savannah has twenty-three squares in the heart of the city giving it a languid beauty worthy of imitation by more strenuous cities. Mount Vernon Place, Baltimore, is one of the most beautiful central open spaces in America. It is the expansion of a hilly street leading up to Baltimore's most exclusive residential section. This is approached by easy terraces, well planned, and includes a

particularly ornamental fountain and the impressive Washington Monument.

The Capitol grounds of Hartford, Richmond, Nashville, Madison and Sacramento are successfully treated central spaces serving those cities well.

PARKWAYS AND BOULEVARDS

Boulevards have a different significance for cities with exceptional topography and for cities where the boulevard must be straight and level. The boulevards of Chicago get all their beauty from landscape architecture, except where they approach the lake. The Lake Shore Drive is a very beautiful avenue, the beginning of a boulevard that is planned to continue to Milwaukee, a distance of eighty-five miles. The existing driveway along the lake shore in Milwaukee is much more beautiful than that of Chicago because it is on a bluff above the lake. The boulevards of Buffalo, Indianapolis and Louisville suffer from the same limitation until they reach the countryside, but this only enhances the importance of their simple beauty in the city.

A boulevard is a park-like street.

The city of Savannah is unique in preserving a certain inner portion of the most delightful residence district free from the intrusion of the steam railways, and maintaining thus, in addition to one very important thoroughfare, others which have the nature of boulevards. Duluth's Boulevard Drive is one of the most beautiful roads in the country, following an old beach line of Lake Superior, at a height of four or five hundred feet above the present level of the lake. Charleston, South Carolina, takes pride in the Battery, an esplanade stretching for five hundred yards along the water front. Several southern cities have delightful shell roads along the seashore, Mobile revelling in one eight miles long. Portland, Maine, has two promenades, giving views of its beautiful water approaches.

A boulevard often reveals to comatose citizens the natural beauty of their community.

New York City has no avenue set aside for pleasure traffic in the heart of the city. It has, however, made notable improvements along the Hudson and Harlem rivers, with which the

treatment of the East River makes a painful contrast. Beginning at Seventy-second Street, the steep bank of the Hudson River has been made into a beautiful park for several miles bordered by a parkway, which gives its patrons a wonderful view of the Palisades. The driveway has recently been extended beyond the Hudson Memorial Bridge at Spuyten Duyvil. The Harlem River Speedway was constructed originally to meet the needs of owners of fast horses. It borders the south bank of the Harlem River with a background of precipitous rock. The road is supported by a bulkhead that gives it a very picturesque elevation above the stream. The timber bulkhead is being supplanted by one of reënforced concrete. The original cost and the difficulty of maintenance represent an expense that can only be justified by the exceptional beauty of this driveway.

New York has boulevarded a number of its streets in Harlem and has transformed Delancey Street on the East Side since it became an approach to one of the new bridges. There is a central park area planted with hedges of trees, between which in some places the public school children have been allowed to cultivate their school gardens. The other boroughs have a freer chance to develop driveways than Manhattan. The Eastern Parkway affords to Brooklyn outlets to the ocean and to rural Long Island. The Bronx is given easy access to the charming country north of New York by the Bronx River Parkway, fifteen miles long.

With subways and tunnels below and jitneys and jitfords above, Manhattan will soon have to designate some of its scant longitudinal streets as boulevards.

St. Paul and Minneapolis have united to develop a boulevard system that will take in the Mississippi River and the lakes in and about the Twin Cities as far as Lake Minnetonka. The main water frontage of the Mississippi lying between the two cities has already been provided with a parkway on each side and the Minneapolis chain of lakes has been connected with a boulevard system.

Some of the most beautiful boulevards in the country are to be found in and about Boston, beginning with Commonwealth Avenue, which starts at the Public Gardens and runs through the Back Bay district. It is a spacious street 240 feet wide with two driveways and a broad middle strip where paths lined

by benches wind under heavy shade trees. The treatment through the solidly built residence quarter is necessarily formal and geometrical, but as it approaches the suburban districts it follows the contour of the hills and becomes more and more natural. The driveways which radiate in all directions now from Boston, following the metropolitan reservations, furnish doubtless the most extensive boulevard system in the world. Provision is often made about Boston — a plan followed rather imperfectly in Minneapolis and New Orleans — for the laying of railway tracks in a turfed space in the middle of the boulevard, with a drive on either side, thus giving a chance to all kinds of tourists to see the beautiful country through which the boulevard runs.

Metropolitan Boston has over fifty miles of parkways, much of it including so much bordering land that the parkway spaces total over eight hundred acres.

DRIVEWAYS

The park system of Portland, Oregon, includes driveways that give unique views. There are five isolated snow peaks within view of Portland and two beautiful river valleys — the expansive Columbia and the picturesque Willamette. The latest of the driveways is Terwilliger Boulevard, winding along the sides of hills so that a new view of the Willamette Valley and the mountain background is visible at every turn. A beautiful lighting system of concrete standards and single incandescent globes lines this driveway for five or six miles.

Portland is the beneficiary of a marvelous county road leading to the bluffs of the Columbia forty miles away.

Seattle's park system (more than half completed) includes a plan for a fifty-mile chain of drives along the shores of the lakes and on the high ridges overlooking the Sound and with outlooks on the mountains. Seattle is rarely fortunate in mountain views. Mt. Rainier's isolated snow-clad peak is visible to the east and the Olympic range of snow mountains to the west. Colorado Springs has beautiful driveways leading out to its remarkable rural parks, Palmer Park and the Garden of the Gods. Madison, Wisconsin, has chosen to lay its hands on the country not by rural parks but by driveways radiating in all directions about its many lakes.

Cities are engaged in lively contests to enjoy the benefits of national highways like the Dixie Highway, the Lincoln Highway and the Santa Fé Trail.

Denver's boulevards not only lead to city parks, from which views may be obtained of its extraordinary mountain scenery, but also to parks in the mountains. Mr. John Brisben Walker advocated the idea of mountain roads in 1910. The Chamber of Commerce promoted the idea, power was secured from the state legislature to acquire land outside the city, and Frederick Law Olmsted was invited to plan the roads. Land has been bought on top of Lookout and Genesee mountains. A road has been built to Lookout Mountain, twelve miles from the city limits; another to the summit of Genesee Mountain, four miles beyond, as well as one winding around the mountain to the valley. The roads connect also the towns of Golden and Morrison, and give visitors a long mountain circuit, in addition to the use of picnic places provided by the city on the mountains.

It is not hard in some of the mountain cities to hitch one's wagon to a star.

OUTER PARKS

The great parks, which preserve the natural features, usually by virtue of being remote from the congested district, are of the utmost importance for rest and recreation, though they should not be allowed to conceal the city's need for smaller parks. The most famous of the great parks is probably Fairmount Park in Philadelphia. For many years this park was the largest in the country and it still maintains its reputation in many parts for natural beauty, while it continues to grow and now contains over three thousand acres. Although it is located in the north-western corner of Philadelphia, the modern trolley systems give it a very large patronage from the population of that city. To accommodate them it has allowed a trolley line to invade its groves and ravines.

This system of park transportation presents a critical problem. Fairmount Park is so extensive in area that it would require much leisure to do justice to its beauties or enjoy its possible benefits. There are thousands of people who make but one or two trips to the park in the course of a year. Ought they not to be allowed to see all that is possible on those brief visits?

Yet this cannot be done without disfiguring the natural features. The great bridge across the Schuylkill, the cuts and fills throughout the park, unmistakably detract from the beauty of the landscape.

If, as Superintendent Foster of the South Parks, Chicago, says, "Park roads are regrettable necessities," what shall be said of the inevitably ugly railway tracks?

The question can best be decided apparently by inquiring as to the other facilities for recreation for the people. If the beauties of Wissahickon Creek, which runs for eleven miles through the northern part of Fairmount Park, can be preserved and extended so that the multitudes may still enjoy nature unadorned, perhaps the lower end of Fairmount Park, stretching for a distance of four miles along both banks of the Schuylkill River, may justly be devoted to more democratic or at least more utilitarian purposes. It was in the western part of Fairmount Park that the Centennial Exposition was held. After its disfigurements had been removed Philadelphia enjoyed a great benefit in the subsequent improvements and in the art gallery and horticultural building left there as monuments of the exposition.

Perhaps the jitney may find a more natural field in supplanting the park trolley, leaving the city streets unmolested.¹

If Fairmount Park is famed for priority, Golden Gate Park, San Francisco, is famed for the miracle of beauty conjured out of sand dunes. The elder Olmsted, America's greatest landscape architect, said in 1869 it was hopeless to develop a park out of drifting sand. Nevertheless judicious planting has gathered figs of thistles. No city park in the United States has such wealth of horticultural and arboreal beauty. Eucalyptus trees from Australia rise to over a hundred feet. Japanese exotics flourish in the Tea Garden. Perfect oiled roads lead from the acme of cultivation in the oldest sections to the crude planting designed to hold down the sand on the ocean front.

Golden Gate Park is a garden of Eden, if not an entrance to the heavenly city.

PARK SYSTEMS

Most of the important parks of American cities are what may be called outer parks. They are neither squares nor playgrounds,

¹ See Detroit's park busses, p. 30.

nor are they rural parks remote from the city. Their number is multiplying so fast that it is invidious to select the chief representatives. The way cities are coming to be served by parks is doubtless best indicated by a description of some of the park systems of America. Every large city recognizes the necessity now of uniting its inner and outer parks so that the two accepted standards may be realized: first, that no one shall live more than half a mile from a place of recreation, and second, that the city shall have sufficient park area to provide one acre for each hundred inhabitants.¹

Omaha boasts that its thirteen parks and playgrounds are so well distributed that no home in the city is more than fifteen minutes distant from a place of public recreation.

Kansas City's park system ranks next to that of Boston in completeness. In 1896 parks and boulevards were laid out beyond the ambition of other cities by the method of benefit assessment, levying upon the areas benefited for the cost of parks and boulevards. A \$10,000,000 system has thus been developed, including some of the most beautiful hinterland of Kansas City, a beautiful drive along the bluff overlooking the Missouri River, a picturesque drive through ravines, and several boulevards blazed through slums. The physical and social improvements have abundantly justified the method and established an invaluable precedent for other cities.

"I'm from Missouri" may be the words of a missionary rather than a skeptic.

When a park commission was created in Spokane in June, 1907, they took over a total park area of 173 acres, two-thirds of which was unimproved and encumbered with \$20,000 of debts, while the appropriation for the whole year had been expended. The commission secured a temporary loan of \$12,000 and later a bond issue of \$100,000. Olmsted Brothers were invited to make a park plan. There was still insufficient money, but by 1911,

¹ Among the notable large parks that can be called outer only in the technical sense, because their cities have surrounded them, are Franklin Park in Boston, Prospect Park in Brooklyn, Forest Park in Saint Louis, Audubon and City Parks in New Orleans, City Park in Denver, and the famous park a mile square that was boldly laid out at the very center of the city plan of San Diego. Among the cities that have started with a clean sheet and laid out park systems of a comprehensive character are Indianapolis, Louisville, Memphis, Kansas City, Omaha and the cities of the state of Washington.



Photograph by Gabriel Mordin.

JAPANESE TEA GARDEN, GOLDEN GATE PARK, SAN FRANCISCO, CALIFORNIA.

when the commission plan gave the city a new lease of life, the park area had been increased to 826 acres. In May, 1911, a bond issue of one million dollars was voted. Although the city did not get the benefit of the full amount, the park area was increased to 1934 acres, following the plans of the landscape architects. In five years' time Spokane had raised itself from thirty-third among American cities in its park provisions to one of the leading cities of the country, measured by the serviceability of nearly 2000 acres of park space to 125,000 people.

Seattle's park system is notable, like those of Memphis and Indianapolis, because of its recent and speedy development. Out of \$9,000,000 expended in securing 1800 acres of parks, playgrounds, and boulevards \$4,000,000 were spent between 1906 and 1912. When the agitation for the extension of parks began, the city owned six park areas, only three of which were improved, no playgrounds and no boulevards. In 1914 the city had seven parks, twenty-three playgrounds, and twenty-five miles of boulevard.

Oklahoma City inaugurated its park system by voting \$400,000 worth of bonds in April, 1909. The majority vote of taxpayers was twenty-five to one. Options had been secured, and a boulevard, twenty-eight miles long and two hundred feet wide, was laid out around the city. It includes provision for automobiles in the middle and parkings between that driveway and the carriage drives, with further parkings beyond these. There are no grade crossings in this boulevard circuit, although it has to cross several railway yards. Oklahoma began its park system with outer parks and boulevards because it could get the land cheap.

Six hundred acres of excess land were purchased with the expectation that the increased value of the land when alienated would cover the cost of the system.

BALTIMORE

The parks of Baltimore are notable because of their beauty and the method of financing them. Druid Hill Park is one of the famous original natural parks of America — seven hundred acres in extent, with many miles of beautiful driveways. Baltimore has nearly fifty parks with a total area of considerably

over 2000 acres, and the city has borne a direct cost of only about \$10,000. In 1903 the Municipal Art Society employed the Olmsted Brothers to plan the park extensions of Baltimore. The people voted a loan of \$1,000,000, but this was to be repaid by the happy method that Baltimore has for meeting its park improvements. In 1860 Baltimore had a mayor of vision, Thomas Swann. He persuaded the street railway company to accept a franchise that involved the payment of 20 per cent of its gross receipts to the city for the purchase of parks. This was subsequently reduced to 9 per cent. The first year of the operation of this franchise Baltimore received \$33,000. In 1913 it received \$585,000. Thus Baltimore's street car patrons support the Baltimore park system.

Baltimorean strap hangers pay their tithes into their own pockets if they use the parks.

WASHINGTON

It is perhaps prophetic to claim that Washington has a park system. Yet in spite of gaps in its boulevards and exceptional advantages enjoyed by the northwestern section of the city, the capital of the country has such a wide distribution of open spaces that it is more completely equipped than any other city in the country. Its recreative facilities are not so great as those of Boston and Chicago, but in actual park spaces it equals those two and a number of other cities combined. There are about 350 park reservations in Washington. They only total 738 acres, but they represent the intelligent and aesthetic use of the various squares, triangles, and circles that are made by the intersection of Washington's diagonal streets.

The chief natural park possessed by Washington is Rock Creek Park, a place of very rugged beauty, which also includes the National Zoölogical Garden, one of the three best in the country. The largest of Washington's parks is the Potomac Park, which has been made on the flats redeemed from the Potomac River. Upon it is located the Lincoln Memorial, from which the Mall extends past the Washington Monument to the Capitol — a long broad park, susceptible of the rarest beauty when it is treated as it promises to be. Property is being secured in the sections of the city that have not hitherto

been favored. These, together with the Capitol grounds, give Washington a rare equipment.

Leisure and beauty are abundant in Washington but recreation is lacking.

BOSTON

The best park system in the world is that of Boston and its suburbs. The chief features of this comprehensive system are the Boston Common and Public Gardens, the seventy small parks and playgrounds scattered about Boston, the local parks of the several municipalities in the metropolitan district, and the metropolitan reservations, ranging thus from central parks and local playgrounds to great rural preserves.

The late Charles Eliot wrote a letter February 22, 1890, in which he said:

"Within ten miles of the State House there still remain several bits of scenery which possess uncommon beauty and more than usual refreshing power. . . . The end to be held in view in securing reservations of this class is wholly different from that which should guide the state commission already suggested, and the writer believes this different end might better be attained by an incorporated association, composed of citizens of all the Boston towns, and empowered by the state to hold small and well distributed parcels of land free of taxes, just as the public library holds books, and the art museum pictures, for the use and the enjoyment of the public. . . ."

With amazing rapidity the idea grew in popular favor, the legislature authorized the preliminary investigation commission, the surveys were completed, the lands acquired, and, within a decade, not only the broad plans but the chief details had been more than realized. On October 6, 1892, Charles Eliot wrote:

"As I conceive it the scientific 'park system' for a district such as ours would include (1) spaces on the ocean front, (2) as much as possible of the shores and islands of the bay, (3) the courses of the larger tidal estuaries, . . . (4) two or three larger areas of wild forest on the outer rim of the inhabited area, (5) numerous small squares, playgrounds, and parks in the midst of the dense populations."

The consequence of his persistence was the presentation and subsequent enactment of a bill by the legislature of 1892, providing for a metropolitan park commission to consider the prob-

lem of parks for this entire district. Mr. Charles Eliot was made landscape architect, and Mr. Sylvester Baxter secretary of the commission. The entire summer was spent in investigating the delightful surroundings of Boston, many of them unknown territory to the commission. The report which the commission presented in 1893 was so ambitious that even the authors of the plan scarcely hoped for its acceptance. Their expectation was that an educational campaign might gradually bring the people to an appreciation of this comprehensive scheme. Nevertheless, the unanimous support of the legislative committee to which the bill was referred, of Mayor Matthews of Boston, and of the press resulted in an immediate enactment of the bill. The Metropolitan Parks District was created, including eleven cities and twenty-five towns, a park commission was appointed, and the first loan of \$1,000,000 was authorized. Since then over \$10,000,000 have been expended, of which \$3,000,000 have been devoted to boulevards and parkways and the remainder to securing the ten thousand acres and more in the reservations. One-half of this amount was secured from the several municipalities and one-half from the state.

Dreams come true.

The fact that within ten years so ambitious a project should have been not only carried out but amplified, is perhaps the most encouraging incident in American municipal progress in the last decade of the nineteenth century. The commission to execute these plans was appointed in 1895; the work of the next seven years belongs almost in the realm of romance. The commission has acquired ten thousand acres of forest, seashore and river bank, has not merely appropriated some of this area, but has developed much of it.

The forest reservations aggregate over seven thousand acres, and though they have been selected on the basis of intrinsic merit, by a happy accident they are so located as to make an equitable distribution of park areas over the entire metropolitan district. The most important of these reservations is the Blue Hills, covering an area, if we take in two lakes on the margin of the reservation, of more than five thousand acres, the largest tract devoted to recreation belonging to any municipality in the United States. This reservation lies due south of Boston from nine to eleven miles distant from the State House.

In a semicircle from this point, running to the Lynn Woods, near the sea on the north, is a continuous succession of river and forest reservations along the Neponset, Charles and Mystic rivers, together with the local parks of Boston, Brookline and Cambridge, and including the other great reservation of the metropolitan commission on the north, Middlesex Fells. Middlesex Fells contains over eighteen hundred acres of wild and rocky woodland, to which must be added eleven hundred acres held by the metropolitan water board and the local water boards of Winchester and Medford, which, for all practical purposes, also constitute a park area. The Lynn Woods, over two thousand acres in area, forms another one of the local parks which must be included in the provision for the metropolitan district, because of its great beauty and extent, although, like Franklin Park in Boston, it is not included in the administration of the Metropolitan Park Commission. The metropolitan district presents a fine combination of rivalry and co-operation.

This great metropolitan system, then, includes forest reservations in the first place; in the second, the protection of twelve miles of seashore for the benefit of the public; in the third instance the preservation of the banks of nearly all the streams in the metropolitan district — fifty-six miles; and fourthly, a system of parkways and boulevards which will connect all of these different elements.

Following the example of Boston, other Massachusetts cities have undertaken to make amends for the neglect of the past by redeeming portions of their shore line. There has been created for the accomplishment of this purpose a board of Trustees of Public Reservations, which has reported on the condition of every city and village on the seashore, has indicated what they have already done to preserve their public holdings and what ought to and can now be done. They point out the contrast between Lynn with its magnificent woods and other considerable towns, such as Gloucester, which have nothing. Nearly every one of these cities owns some little spot from which the sea can be enjoyed, sometimes including a portion of the shore. For the most part they have allowed the old commons and other public lands to slip out of their hands, except in the island of Nantucket, where there are still one thousand acres of undivided common.

It is worth mentioning that the preservation of Lynn Woods by the park and water boards is in reality a restoration to public ownership of two thousand acres of woodland which was once a common.

Yankee thrift is just being socialized.

RURAL PARKS

The rural parks of Boston represent a more complete system than any other city boasts. Its nearest rival is Essex County, New Jersey. Perhaps the most encouraging feature in the establishment of these two great systems is the expedition with which it was accomplished. Within ten years by an expenditure of ten million dollars the Boston district had added to its park provisions ten thousand acres. In Essex County, New Jersey, an expenditure of five million dollars in eight years gave them a park system of 3600 acres. According to Alonzo Church, first secretary of the commission, "When the commission came into being in 1895 there were, within a county of about ten miles square and containing a population of three hundred thousand people, only twenty-five acres of usable park land. This was comprised in the few public squares in the cities of Newark and Orange, which the foresight of the early settlers had reserved."

More than one public school has a campus larger than Newark's park system in 1895.

Two great accomplishments must be credited to the Essex County Park Commissioners. They provided parks and playgrounds near the congested districts by utilizing land which was entirely suitable for recreation but was virtually valueless for building purposes, thus furnishing parks at a minimum expense in the localities most needing them. They also appropriated some of the most beautiful natural scenery of their very picturesque county by reserving hilltops and slopes beyond the present area of settlement. One of these, Eagle Rock, the summit of one ridge of the Orange Mountains, rises abruptly 150 feet from the plain below, and is said to give an outlook "over more human habitations than from any other natural elevation in the world." The view includes Newark and the Oranges, Elizabeth, Bayonne, and Greater New York with a population of six or seven millions.

On the other side of this ridge, and particularly in the other mountain reservation, one may wander for miles out of sight of human habitation.

The Essex County park system is in a sense a contribution to Metropolitan New York. It would be more accessible to Manhattan than the parks of Staten Island even if that virgin area were not innocent of parks. New York's rural advantages, already under public control, should also include the Hudson County Park system which is designed to connect the Essex County system with Palisades Park. A joint commission of the states of New Jersey and New York is responsible for the Palisades Interstate Park. It starts just above the Fort Lee Ferry and runs along the Palisades to the Harriman tract in the Ramapo Mountains. This tract and Bear Mountain, added to the intervening area, make a park of 20,000 acres. Within twenty-five miles of the City Hall there are over 30,000 acres of park space. While most of this does not belong to the city of New York, it puts its facilities within range of comparison with Boston and Chicago.

New York is still a parasite, while Staten Island and Blackwell's Island do not furnish public recreation.

Chicago (or rather Cook County) has been authorized to create a forest reserve district by the expenditure of a million dollars a year. It has also been authorized to issue \$10,000,000 in bonds. Chicago is now sure of getting the beautiful Skokie Marshes on the north, the banks of the Desplaines River on the west, the highest section of Cook County — a beautiful wooded area — to the southwest, and the banks of the Little Calumet River that leads to Lake Michigan. Chicago will thus have a girdle of rural parks on the city's circumference. If it develops, as it promises to do, its outer boulevard along the sand bars of Lake Michigan it will have both an outer and an inner circle of parks and boulevards amounting to 30,000 acres or more.

Chicago is atoning for filling up all of its first park with its public library building.

Denver's mountain drives, already described, lead to two mountain reservations that are more like the mountain adjuncts of European resorts than anything else in America. With the assistance of congressional legislation, so that government lands were sold to Denver at a minimum price, the city has been able

to annex some of the best spots in the Rocky Mountains. This land has been made accessible now by beautiful roads and is already being used by campers and hikers.¹ For those who have not motor cars there is the funicular railroad up Lookout Mountain. Boulder, Colorado, has a rural park that ranks perhaps next in size to the Blue Hills Reservation of Boston — nearly 3500 acres on the eastern face of the Rocky Mountains, accessible to the city of Boulder by trolley lines. The park is approached by an ornamental gateway and the foreground is landscape-gardened. It contains an auditorium with a seating capacity of 5000.

San José has a park in a canyon seven miles from the city, reached by road and trolley car.

RECREATION IN THE PARKS

One of the most helpful aspects of park development in America is the increase of patronage following the multiplication of activities permitted or encouraged in the parks. The athletic field in Prospect Park, Brooklyn (which has twenty baseball diamonds and eleven cricket fields), the West Side Park in Jersey City, and the Meadow in Washington Park, Chicago, represent an encouragement of participants rather than spectators that marks a hopeful era in American health and recreation. The National Archery Tournament is held annually in the Washington Park meadow. The South Parks of Chicago provide nearly fifty baseball diamonds. In addition to the areas flooded for skaters twenty ponds are kept in condition for skating by the South Park Commission and three rinks are maintained for curling. The ice was in satisfactory condition on eighty-four days in the winter of 1911-1912.

Chicago leads in tennis provisions, hundreds of courts being maintained in the city parks. Chicago was a pioneer in public golf courses, although it has been distanced by New York, Des Moines and other cities in the quality of the links. Chicago has two public golf courses in Jackson Park, as well as courses in Garfield and Marquette parks. The Jackson Park course of not quite standard length has been patronized by ten times as many people in one day as are dispatched in a national tourna-

¹ See p. 311.



Photograph by W. M. Wall, Denver.

VIEW OF THE ROCKIES FROM CHEESMAN MEMORIAL, DENVER.



ment. That golf is not a luxurious game for the leisure class is evidenced by the signboard at Jackson Park that says the golf shelter will be open at 4:30 A.M.! It has been the practice to give out tickets, often requiring people to wait hours before playing. Chicago is now experimenting with the St. Andrews method of assigning hours the day before. Two five-cent car fares enable many people to spend most of their waking hours in the summer at the Jackson Park golf course, Chicago, as they do at the Revere Beach seashore reservation, Boston.

A mahogany tan may be acquired for ten cents a day by people who carry their own lunch.

Chicago has also led other cities in the provision of food and refreshments by the South Park Commission. Until the recent advent of a hopelessly commercial president, the South Parks led the world in the municipal provision of refreshments. Each park and playground had a refectory, where food of the best quality was supplied at cost, and no concessionaire defiled the public grounds. The ice cream for all of the South Parks was prepared at the refectory in Washington Park. Cleveland and Tacoma are cities where the profit maker has been eliminated in the supply of park refreshments. Other cities justify the presence of the concessionaire by the character of the refreshments supplied. In Central Park, New York, Prospect Park, Brooklyn, Lincoln Park, Chicago, and the Zoölogical Garden, Cincinnati, there is provision for that unhappy rarity of American life — outdoor eating!

The Japanese Tea Garden in Golden Gate Park, San Francisco, is one of the most beautiful resorts to be found anywhere. The entire atmosphere is Japanese in that sub-tropical park.

Most park authorities give abundant encouragement to picnic parties so that they may provide their own lunches with comfort and convenience. The South Parks in Chicago put no restrictions upon private lunches but set a force of men to work after each holiday clearing up the débris left by the multitude. Before the afternoon of the fifth of July or the 31st of May in Chicago, the parks have resumed their normal appearance, although at dawn they may have given the impression of having been just deserted by an invading army. Birmingham and many other cities provide wire incinerators in which people may destroy their own refuse. Denver and Los Angeles in their

rural parks encourage campers by building stone or concrete stoves. The parks are thus protected against fire, while both the preparation of food and the destruction of refuse are made easy for the camper.

Vandalism disappears as public possessions multiply.

The question of charging for park facilities is a nice one. In Chicago the various sports are encouraged by the free provision not only of grounds, but of lockers and baths. In the Jackson Park golf course the shelter contains lockers for 2000 men and 800 women, to which an individual may have a key for the year. No charge is made for these or for soap or bath towels or the use of the golf course. No charge is made for the tennis courts or nets.

People may take "the land of the brave and the home of the free" too literally.

Philadelphia and Cincinnati have admirable zoölogical gardens located in their parks, but under the supervision of private societies that charge admission. The zoölogical gardens of San Francisco, Washington and New York are vastly superior and are free. These three cities are rivals for the claim of leading in zoölogical provisions in America. They establish the important precedent that the animals shall have a maximum amount of freedom, as well as the spectators. In fifteen years there have been erected in Bronx Park, New York, fourteen animal buildings and thirty-five inclosures, harboring nearly 5000 animals. This makes the Bronx Park Zoölogical Garden the largest in the world.

San José has boldly cut the Gordian knot by providing "pay-as-you-sit" benches in the parks. The Boston Common is so jealously guarded that the authorities feel that it can only be enjoyed by patrons who are awake.

MUNICIPAL FORESTRY

The forester or shade tree commission is now a municipal institution. Many small cities have had a municipal forester for years, chiefly because of the absence of parks. Small cities throughout the United States have also had generous provision for trees made by the natural inclinations ^{~e} _{the} inhabitants, who were accustomed to them in the country.

While the larger cities have ruthlessly destroyed trees or stupidly neglected to plant them, some of the smaller cities have actually had too many. The chief function of municipal forestry is to multiply appropriate trees in the streets, but an important secondary function is to thin out the trees so that they are individually well proportioned and the streets sufficiently and not extravagantly shaded. The larger cities that have had the longest experience in the public supervision of trees are Washington and Louisville. In both of these cities the public authorities have had charge of the streets from building line to building line, not from curb to curb—the prevailing custom. This method puts the private property owner under the same sort of responsibility in which the owner of forests finds himself in Europe. The trees are immediately his, but ultimately the city's, and he cannot neglect them at will.

As William Morris said: Let no one profess love of art who wantonly cuts down a city tree.

Newark is the city and New Jersey the state in which the greatest amount of work has been done in recent years, but many other cities have efficient forestry departments. The street department of Birmingham offers to haul away tree trimmings if property owners will notify the department. Dallas has established a city nursery, under the direction of the park superintendent, and plans to sell trees at cost to the citizens. Denver in 1913 distributed 5000 elms and 3000 maples to the property owners, the planting to be done under the direction of the city. In the seven years previous to that 111,000 trees had been distributed, 75 per cent of which were thought to have flourished. Washington spends \$43,000 a year on its street trees, Buffalo \$50,000. The \$7000 spent by Syracuse for the maintenance of 45,000 trees represents fifteen cents per tree per annum, as compared with \$1.25 per tree in Paris and fifty cents per tree in Newark.

Los Angeles initiated in California the method of tree planting by assessment. A state law was passed in June, 1913, establishing a procedure for the care, planting or removal of street trees. The city council adopts a resolution, which is referred to the shade tree commission or gardening department, which reports to the council the general character of the improvement, the cost, the relation of the trees to the streets, alleys, and abutting

lots, the assessment per front foot. If the council approves of the report a hearing is arranged for. If the owners of the frontage object, a similar resolution cannot be introduced for six months.

Trees are as necessary to a city street as gills to fish.

George A. Parker, the Superintendent of Parks of Hartford, Connecticut, one of the best informed park authorities in the country, estimates the value of trees in his city on the same basis on which land values have been determined. He appraises the value of the city streets of Hartford at half a million dollars. Hartford has about one tree to ten persons; Springfield, Massachusetts, has one tree to five persons — possibly the largest proportion of any city of over 50,000 people. This is particularly due to the care of an efficient forester. The cities of Massachusetts have had a long and tedious struggle to protect their trees from the pests that have infested New England for several years. The state has reimbursed cities for expenditures in routing the pests.

The cities and towns of Massachusetts spent three and one-half millions in fighting moths from 1905 to 1913; the Metropolitan Park Commission three-fourths of a million.

The Entomological Experiment Station at Central Park, New York, has estimated that, partly owing to the large importations of plants from abroad, there are two thousand identified species of parasites in Central Park. The protection of trees against such a multiplicity of enemies is an irresistible argument for the city forester or the shade tree commission. Private individuals are as helpless as against human armies.

Taking to the woods may now represent valor as well as discretion.

NEWARK

There are fifty-two shade tree commissions in New Jersey which puts it to the front, and the leading city in the state is its metropolis, Newark. Acting under the state law, Newark created a Shade Tree Commission in 1904. This commission was given "exclusive and absolute control and power to plant, set out, maintain, protect and care for shade trees in any of the public highways of the municipality." In 1905 the commission was given control of the parks of Newark. The commission

has performed invaluable service in saving the older trees. In ten years it set out 27,000 trees, beautifying 180 miles of streets. A city nursery has been established that serves both the parks and the streets. Educational propaganda has been carried on, enlightening the citizens regarding the value of trees and their care. Seven times in a season each tree has its soil opened up to the air and sun. The trees are set out by special assessment, but the subsequent care falls upon the general tax. Two weeks' notice is given before proceeding with work, but Newark has had very little opposition from the citizens, who recognize that the work is more cheaply and better done than individuals could perform it.

The Shade Tree Commission has assisted in the observance of Arbor Day in the schools. The commission has issued some very attractive literature. One year a leaflet called "The Tree Calendar" was published, telling of the life of the tree from month to month. The children have been invited to become acquainted with the rich plant life of Essex County. In its mountain reservations are found most of the flora of this zone. Leagues of Shade Tree Protectors have been organized among the school children.

"Back to the land" may be utopian. Forward to the woods is an urban obligation.

CHAPTER XVI

PUBLIC RECREATION

THE JOY OF THE CITY

THE joy of the city is a twentieth-century discovery in America. In 1890 there were in the United States one public playground, one public swimming bath, no movies, and yet the schoolhouses were closed and the parks inhospitable. Commercial amusements multiplied rapidly at the end of the nineteenth century; public play began to be organized. Still the twentieth century inherited the superstition that play is an occupation of childhood. Schoolhouses were already centers of play as well as of instruction but tradition was buttressed by legal precedent when an endeavor was made to open their doors to adults. Why has a vastly increased patronage of outdoor sports, motion-picture shows, and other popular forms of entertainment been accompanied by a wider use of the schoolhouse than was available before these forms of recreation were discovered? It must be that the American is beginning to apprehend the joy of the city. Joy must be set in apposition to monotony and care, but also to gaiety, frivolity, and intoxication. There have been hilarity, boisterousness, and intemperance without joy. The unregulated theater, dance hall, and saloon have ministered to the demand for recreation without producing joy. It is the public forms of amusement, the use of common property, that signalize a new urban spirit.

“Joy cometh in the morning.” The twentieth century is the dawn of a new day.

BOSTON FIRST IN ORGANIZED PLAY

Organized life takes care of but a small fraction of the child's time. “Street and alley time” includes too many hours of

the city child's day. Even the streets in New York and Redlands are consecrated to play at certain holy hours. The streets and alleys were still more forbidding in 1872 when the first Brookline playground was established. Twenty years later Boston opened the Charlesbank gymnasiums. While other cities followed steadily — Chicago opening a playground in 1893 and beginning its brilliant history with the Special Park Commission in 1899 — Boston remained the pioneer. Its original public bathing provisions date from the removal of the embargo on the Atlantic Ocean in 1866. They have been perpetuated in the L Street Bath, one of the unique institutions of America. This bath has had a longer continuous history than anything of its kind in the country. Boston also established a public ocean bathhouse at Revere Beach ahead of any other city. Boston's Charlesbank has similarly furnished the precedent for outdoor gymnasiums elsewhere, while the East Boston indoor gymnasium was the first public institution of its kind in America.

The East Boston gymnasium was originally a transformed skating rink given to the city in 1897 by a public-spirited woman. In two years' time Boston had begun to build its own gymnasiums, starting with the structure in South Boston. Simultaneously, the public bath movement was growing, and Boston's subsequent gymnasiums have usually included showers and swimming pools. The buildings are taxed by the attendance of people at the classes. The physical director is assisted by a medical examiner of each sex. Records are kept by which people can determine their progress. These have proved invaluable to the civil service candidates for the police and fire departments. Public gymnasiums have incidentally been an indirect aid to the police department, as is evidenced by the decrease in juvenile arrests in their neighborhood.

Putting the shot seldom leads to the ball and chain or the hand-spring to the lock step.

NEW YORK PLAYGROUNDS

When one considers that there were ninety-four playgrounds in Greater New York in 1914 it seems incredible that there was virtually none in the nineteenth century. According to the Tenement House Committee of 1894:

"While New York, including the thinly populated annexed districts, ranks sixth among cities, New York below the Harlem has a greater density per acre than any other city in the world, namely, 145.2 per acre. Paris comes next with a density of 125.2 per acre, and Berlin follows with 113.6. . . . Sanitary district A of the eleventh ward contained, June 1, 1894, as many as 986.4 persons to every one of its thirty-two acres. It may be that these figures are equaled in some parts of the world, but the only information at hand indicates but one district approaching this — a part of Bombay, which had in 1881 a population of 759.66 to the acre, in an area of 45.06 acres. . . . The densest small section of Europe seems to be the Josefstadt, of Prague, with its 485.4 to the acre, but New York's tenth ward exceeds this with not less than 626.26 to the acre, and the tenth ward has nearly five times the acreage of the crowded district of Prague."

The recognition of the needs of the tenement district dates back to 1857, when a legislative committee inquired into the condition of the New York slums. They revealed the fact that the evils of New York's overcrowded East Side were not due to the original sin of the inhabitants, but to such congestion as has been indicated above. It was not until 1879, however, that the first effort was made to correct these evils. The churches became interested, a citizens' committee was appointed, and out of that agitation grew the Tenement House Commission of 1884. Model tenements were erected, sanitary regulations were introduced, occasional death-traps were destroyed, but it was not until the next decade that the idea took root that tenements might be torn down not to make way for other tenements, even though these might be "models," but for playgrounds. Mr. Jacob Riis has told the story often of the destruction of Mulberry Bend, in which his experienced hand as police reporter and friend of the children was conspicuous. The Tenement House Commission of 1884, as he says, "had rather timidly suggested that a street be cut through it to let light and air into the bad block." Three years more were required to reach the decision that the entire three acres should be wiped out.

In 1887 an act was passed which authorized New York to spend \$1,000,000 a year for the establishment of small parks, and Mayor Hewitt, who was the author, said, "The playground was assumed to be an essential part of the park."

This act would have made the creation of Mulberry Bend Park easy, had it not been for official delay. Mr. Riis dogged the steps of the officials until he secured the admission from one of

them in the city hall that "no one down there had been taking any interest in the thing." This gave him his text for the newspapers; the outcry which was raised resulted in the first steps being taken to get rid of the tenements. Two years were required to get a map of the proposed park filed under the law, six years more were occupied in condemning forty-one pieces of property. The cost to the city in the original estimate was \$1,000,000, and an assessment of half a million was laid on the surrounding property because of the unquestioned benefits to be derived from opening so much space and making it attractive. The legal talent employed by the landlords, however, was able to persuade the courts that the park was an injury and an extra burden of half a million was laid upon the city. Finally, with all the houses down and the space open to the sunlight, another year was required before its transformation into a park began. According to the law of 1887, allowing \$1,000,000 in one year for park purposes, \$8,000,000 might have been spent, but when the final action came to be taken on Mulberry Bend Park a special law and appropriation were necessary because the amount needed at once was more than \$1,000,000.

The establishment of Mulberry Bend Park was, however, only the first step, as it remained a park with inclosed lawns, on which even the famous fighter who more than any one else secured this boon for the children, was not allowed to tread without the forbidding command of the police reminding him of the ubiquitous sign, "Keep off the grass!" In addition to the extensive grass plots, there are broad concrete walks, and in one end a shelter, but no space, except such as a widened street affords, for the children to play.

In 1889 the Brooklyn Society for Parks and Playgrounds was incorporated under a new state law.

The Tenement House Commission of 1894 recommended the clearing of buildings for the establishment of Seward Park. The bill became a law in 1895, providing that construction should begin within three years. Another Tenement House Committee sat and investigated conditions without anything being done. In 1897 Manhattan and Brooklyn received an appropriation of \$30,000 for schools and playgrounds. Twenty playgrounds were maintained for two months. It was only after the Tenement Law of 1901 had been passed that a municipal playground

began to materialize. Charles B. Stover, whose pioneer efforts were finally recognized by his appointment at the head of the Manhattan Park Commission, had urged at the beginning of the playground movement that Tompkins Park be equipped for the use of children. His request received the answer, "No, sir! In the administration of the parks, we must not cater to any particular class in the community."

This same park administration promptly laid out a Speedway for fast trotters in Central Park, as soon as the legislature permitted it.

When the land along congested Hester Street was finally cleared in 1898, a voluntary organization — the Outdoor Recreation League — had to equip it for play because of the handicap of New York's historic debt limit. A New York contractor took nine months to level the ground. Then the Outdoor Recreation League had to maintain the improvised playground and guarantee to save the city of New York any expense for accidents. On June 3, 1899, the playground was opened under these voluntary auspices. It was so popular and successful that plans for the treatment of Seward Park were made and presented to the Park Commission. That august body, however, had its own conception of the needs of this most crowded area in the world. Their words were: "These plans contemplate a small park in the natural style, with lawns and shrubberies covering as large an area as possible."

Under pressure, revised plans were made by the Commission which provided for one-tenth of the space to be used as a playground. The insatiable friends of the children would not be content with this sop, and their agitation finally resulted in a playground and stadium that are probably the best patronized on the globe. Streets were closed, gymnasium and baths were provided, and the people of this neighborhood were able to celebrate May Day, 1903, in a public playground. The improvements have continued, sometimes with undue elaboration, until these four tiny blocks of Manhattan have been transformed into Seward Park playground at a cost of between two and three million dollars.

Many a big city could get a whole park system for the cost of a belated playground in New York.

New York, like other cities, has had to meet the question



SEWARD PARK, NEW YORK'S THREE MILLION DOLLAR PLAYGROUND.



THE ROMAN BATHHOUSE IN THE GROVE, KANSAS CITY, MISSOURI.



whether the park or school authorities should administer the playgrounds. Whereas in Chicago the playground development has been chiefly independent, in New York it has been increasingly a function of the Board of Education. In 1913 there was an attendance of two and a half millions at the recreation centers and over 6,000,000 at the vacation playgrounds.¹ One hundred and sixty-three school buildings were used as after-school play centers, accommodating about three hundred children each at a cost of a little over one cent apiece. One thousand teachers are employed to direct the play in the New York school playgrounds. Most schools are equipped with shower baths, which are as popular as any of the organized games. During the summer a dozen school buildings with available roofs are thrown open to the public in the evening. The roof playgrounds are covered with wire netting so that they are safe for children. One in five of the New York playgrounds is dedicated to mothers and babies. The only other children admitted are those who are "little mothers." The Board of Health nurses assist the playground staff by giving instruction as well as services to the mothers of babies.

New York is taking play seriously.

The enormous expense of playgrounds in the congested parts of New York has led to the setting aside of streets at certain hours for the play of children. Police Commissioner Arthur Woods closed to traffic in 1914 one block in each of twenty-five streets in Manhattan, Brooklyn and the Bronx between 3 and 6:30 P.M. A sign is put up diverting traffic, and police supervise the area. The children are given considerable latitude, even basket ball and baseball being permitted. The complaints from the neighbors have been insignificant.

A simple device for furnishing public amusement is found in the recreation piers of New York.² There has been added to one of the regular docks a second story without interference with the shipping on the lower floor, and a large space is thus secured stretching out over the water, where on sultry summer evenings there is access to such refreshing breeze as may exist. Eight

¹ Appendix 1.

² Boston, Philadelphia, Baltimore and Chicago also have recreation piers. The latest are those of Chicago and Baltimore. In addition to the open pier, there is an assembly hall, with foyer and anterooms for indoor recreation.

recreation piers are found on the North and East rivers of New York.

CHICAGO PLAYGROUNDS

The first step in the Chicago playground movement was taken when the residents of Hull House in 1892 equipped and supervised a piece of land owned by William Kent. Other settlements secured voluntary aid to open playgrounds in their neighborhoods. In 1895 the spirit of the playground made itself felt among the West Park Commissioners and an outdoor gymnasium and swimming bath were built in Douglas Park. Coincidently with the experiments in philanthropic playgrounds there was a movement for vacation schools. In 1898 the City Council of Chicago appropriated \$1000 toward a fund raised by the Vacation School and Playground Committee of the Women's Clubs of Chicago. Six playgrounds, improvised in very inadequate school yards, were opened in the summer of 1898. Modest as they were, they made such an impression that the City Council authorized the Special Park Commission in June, 1899. The Commission consisted at first of eight councilmen, a representative of each of the other three park boards and nine citizens. It was organized to plan a comprehensive park system for Chicago, especially with reference to the congested areas, and to supplement Chicago's deficiencies by conducting playgrounds. It secured from the legislature authority for the several park boards to issue bonds to the amount of two and a half millions. As a result of the proposals for a comprehensive park and playground system and the appropriation secured by this Special Park Commission Chicago's remarkable playground system was inaugurated.

Chicago has opened playgrounds at the rate of three a year.

In addition to the elaborate provision of playgrounds by the rejuvenated park commissions of the three sides of the city, the Special Park Commission has continued to conduct small playgrounds on pieces of ground owned by the city or leased for a nominal rental or loaned by owners. In a few cases the playgrounds have been extensive enough to permit of ball fields, but for the most part they have been compact areas, the one invariable use of which has been for skating rinks in the winter. In the summer they have been equipped with the usual shelter,

sand piles and apparatus. They are in charge of attendants who keep the playgrounds open morning, afternoon and evening seven days in the week. This branch of Chicago's playground system has grown until it includes now nineteen playgrounds and four bathing beaches. The Commission also has the care of sixty-five open spaces and the city's trees, the city forester being an employee of the department.

The Special Park Commission began with an appropriation of \$10,000 a year. In fifteen years the expenditure had grown ten-fold.

The most dramatic development in the American playground movement was due to the initiative of J. Frank Foster, Superintendent of the South Parks of Chicago. The South Park system has had exceptional facilities because the sectional division of park management in Chicago has given the parks of that side of the city immense revenues from the taxes of the business area. They have thus been able to set a pace that the North and West Sides have had difficulty in following. When they proposed to establish a playground system Mr. Foster visited the leading cities of America and came home with a proposal to improve upon all of them. Thereupon the standard playground was established experimentally at McKinley Park and subsequently in the whole system designed by the South Park Commissioners.

Fourteen playgrounds, in area from five to sixty acres, were secured, for the most part in the congested sections of the South Side. Nearly all of them were equipped with a field house containing an assembly hall, club rooms and a branch of the public library. In wings or separate buildings indoor gymsnasiums and swimming tanks were provided, one of each for each sex. About these buildings were located the outdoor gymsnasiums and playgrounds. There is no charge made for any of these facilities, the expenses being met by general taxation. It is estimated that spectators and participants in the various functions of these playgrounds number 15,000,000 a year.

All honor to Jacob Riis and Charles B. Stover, but Chicago playgrounds lead the world because of their Foster father.

The athletic features were developed under the leadership of Mr. E. B. De Groot, who was the first successful director of one of the little school playgrounds established by the Women's Clubs. Swimming is provided in eleven outdoor cement pools

from June to September. Teams of different ages from the various playgrounds engage in competitive athletics. Meetings of all sorts are held in the assembly halls and on the athletic fields. Concerts, stereopticon lectures, plays and dances are given in the auditoriums, sometimes by the park commissioners and in other cases by organized groups of the people.¹

The Commission has remained conservative in forbidding discussion of religious or political subjects in the field houses, as distinguished from Los Angeles, where the field houses have been used for political meetings and voting. Chicago, like Los Angeles, uses all of its recreational facilities on Sundays, while Boston encourages vice by closing its playgrounds. These playgrounds have become an indispensable element in the life of Chicago. They are felt to belong to the people in most senses, the park commission only remaining unenlightened regarding the propriety of free speech in the people's own buildings.

These public servants are honest stewards of the public wealth, but their annual reports give no adequate account of their stewardship to the possessors of this wealth.

The Chicago West Park Commission has followed the lead of the South Park Commission and opened seven playgrounds, modeled after those of the South Side. The Lincoln Park Board on the North Side of the city has been compelled to follow these precedents, although Lincoln Park is more conveniently located to that compactly built area than any park on the other side of the city.

Chicago has a score of playgrounds superior to any in existence in the world before the twentieth century.²

One of the best by-products of playgrounds has been the discovery that parks and other vacant spaces have had unused possibilities. A vacant lot may involve some expense if it is to be made into a suitable ball ground, but it can be transformed into a skating rink in winter by the labors of municipal servants.

¹ For the form of application for use of hall and clubrooms from the South Park Commissioners, see Appendix 2.

² If a complete list of Chicago's year-round recreation centers, seasonal playgrounds and public beaches were made, it would be: (1) Year-round Parks: South Parks, 14; West Parks, 4; Lincoln Park, 3. (2) Seasonal Playgrounds: South Parks, 5; West Parks, 2; Lincoln Park, 1; Special Parks, 19. (3) Public Beaches: South Parks, 4; Lincoln Park, 1; Special Parks, 3.

Chicago showed the country how to have the cheapest, most constant and safest skating by flooding vacant lots. The fire department floods them, the electric lighting department illuminates them and the police protect them. Chicago also clears its park lagoons of snow, provides shelters, and safeguards the skaters, but the vacant lots are serviceable on many days when skating is not safe in the parks. The flooding of the vacant lots has led to flooding park and playground areas in order to get a maximum of service.

A vacant lot is about 1000 per cent more available for the skater than Lake Michigan.

LOS ANGELES RECREATIVE CENTERS

No city can compete with Chicago in the number of playgrounds and equipment. Play facilities are so fully appreciated in Chicago that the parks have been transformed by supplementing their rural attractions with the diversified features of the playground. Los Angeles has advanced beyond Chicago, adding the element of personal interest by employing people whose qualifications fit them to be not only custodians and athletic directors, but public chaperones. The City Playground Association was created in 1904, consisting of two women and three men, appointed by the mayor. A playground was opened the following summer. It was a modest piece of ground two acres in extent, costing \$11,000 for the land and \$6000 for improvements. It was equipped in the usual way indoors and out for the recreation of children of different ages. A summer house was built that the mothers might sit and watch the children. A club house was added in the form of a bungalow provided with stage, club room and catering facilities. Boys and girls were encouraged to cultivate small gardens and organized into a park department to protect the playground trees and plants. Fifteen years is the dividing age between the afternoon and evening patrons. Clubs are organized for the young people in the evening, not only for gymnastic but for dramatic and musical purposes. Saturday evening is devoted to a community entertainment. A bungalow to house the directors — husband and wife — is a part of the playground equipment.

Thus a public settlement is established with public employees as residents.

The other playgrounds have been planned on this model. Each includes a branch of the public library, and two of them are headquarters for district nursing. The nurses not only render dispensary service but visit the homes and schools. The Municipal Band Commission furnishes music in the recreational centers, as well as in the city parks. In addition to the five playgrounds the Association conducts a recreation center (where the club house dominates the playground and athletic field), a natatorium, fifteen vacation playgrounds connected with schoolhouses and a summer camp. The camp is located in the San Gabriel Canyon.¹ Los Angeles is trying to provide a wide range of recreational facilities, but its most distinctive contribution is in the resident directors who can give a personal touch to the public playgrounds hardly possible in the case of other employees.

While the pioneer South Park Commission in Chicago has reached a stage of arrested development, Los Angeles has become a progressive experiment station.

THE PLAYGROUND MOVEMENT

The Playground and Recreation Association of America in 1913 reported 342 cities with 2400 playgrounds in charge of 6000 paid supervisors. Nearly \$6,000,000 was spent in administering these playgrounds in that year, and twenty cities were planning to spend over \$2,000,000 in equipment in 1914. The playgrounds are becoming training schools for their attendants after the manner of the libraries. Large numbers of these communities conduct only summer playgrounds, but 152 cities reported over 600 centers open in the evening. Seventy-one cities kept their playgrounds open all the year, employing nearly 600 workers. One hundred and eleven cities dispense with private philanthropy altogether and 115 conduct municipal playgrounds depending in part on private funds.

The city fathers are wisely letting a little child lead them.

The playground movement in Massachusetts, guided by its devoted father, Joseph Lee of Boston, had attained such dimen-

¹ See p. 311.

sions in 1908 that a bill passed the legislature requiring each town in the state to hold a referendum on the establishment of playgrounds, unless it had already been equipped. Half of the towns of over 10,000 population had already made provision and only two of the others voted down the playground referendum. The Massachusetts Civic League had also secured legislation giving the cities and towns elasticity in the administration of their playgrounds — under the school committee, the park department or a playground commission. In 1912 the legislature authorized another referendum, this time covering towns of 5000 inhabitants.

Every Massachusetts town has free books; soon directed play will be as free as directed reading in the land of the blue-stocking and the high brow.

PUBLIC BATHS

Public baths are a popular means of recreation and an indispensable protection of the public health, which would have been appreciated long ago had it not been for the American illusion that all houses are provided with private baths. When the Tenement House Committee of 1894 in New York reported that out of 255,000 inhabitants of the tenements which it inspected only 306 had access to bath-tubs in the houses in which they lived, a revelation came to the workers among the poor and to the authorities. Doctor Hartwell writes:

"It is frequently said that houses in American cities are so generally furnished with bathrooms that the need of public facilities for bathing does not exist at all comparable with the need for better bathing facilities in European cities. It is interesting to know that in 1887 Dr. Rohe, of Baltimore, Maryland, in an address delivered before the American Medical Association in Chicago, showed that, contrary to the popular belief, a large proportion of the inhabitants of the American cities were unprovided with adequate bathing facilities. His statistics concerning eighteen cities having no free public baths, among which were Baltimore, Maryland; Cambridge, Massachusetts; Cincinnati, Ohio; Milwaukee, Wisconsin; Minneapolis, Minnesota; Portland, Maine; and St. Louis, Missouri, showed that only about 25 per cent of residences were supplied with bath-tubs. He concluded that five-sixths of the inhabitants of these cities have no facilities for bathing, except such as are offered by pail and sponge, or a river, lake or other body of water which may be easily accessible, but in winter even such sources of cleanliness are cut off."

Hibernating is instinctive with hedgehogs; with the great unwashed it is mandatory.

The first all-the-year public bath which provided swimming tank and showers was the West Side Natatorium in Milwaukee, erected in 1889, at a cost of over \$21,000. A second public bathhouse, the South Side Natatorium, was built five years later at a cost of approximately \$25,000. Both of these public baths antedate any similar institution elsewhere in the country, as the next to be established was at Brookline, Massachusetts, 1895. The swimming provisions at Brookline are exceptionally good, taking rank with the best private natatoriums of the country. There is also unusual encouragement given to school children to make use of these bathhouses, not only by a reduction of the fees, but also by the offering of prizes for skill in swimming.¹

Baltimore has a system of baths and laundries which are very popular, but not adequate to the city's needs. The Public Bath Commission has supplemented the permanent buildings by portable baths in the congested areas. The first experiment was with a tent on an open lot near the docks. This has been followed by a frame skeleton covered with galvanized iron. These structures cost only a little over \$600 to build and only a little over \$30 weekly to maintain. The fees average \$10 a week, adults being charged three cents for soap and towel, and children one cent, except on certain free days. They have had as many as four hundred bathers on a hot day. Nearly as many women and girls have used the baths on the two days allotted to them. These are very modest provisions compared with the Chicago system, but they bear just as eloquent witness to the fact that people want to bathe when they have the chance.

"Flushing the streets is good, but flushing off the youngsters themselves is still better."

Cleveland has erected two elaborate modern bathhouses and dance pavilions in Edgewater and Gordon parks. The Edgewater Park bathhouse is over three hundred feet long, fronting on a beach that is longer still. At one end of the pavilion is a restaurant run by the city, at the other end are tables and chairs for picnic parties. The municipal band plays in this pavilion. There are 313 dressing rooms for women and 343 for men.

¹ Appendix 3.

Similar provisions are made at Gordon Park. At both bathhouses playground, vacation school and institutional children are admitted free. Other patrons are required to pay five cents for a room, five cents for a suit, and five cents for a towel. These are the same buildings that are used for Cleveland's three-cent dances.

Guthrie, Oklahoma, puts itself in the class with European watering places by a substantial reënforced concrete and marble structure containing a swimming pool, where the inhabitants of that city may bathe in salt water. Monroe, Louisiana, has a recreation center that includes two salt water swimming pools fed constantly from a warm water well. The pools are open to the sunlight and are used all the year without charge to patrons.

BOSTON PUBLIC BATHS

While Brookline opened the first public natatorium on the Atlantic coast, Boston has made the most elaborate provisions for summer bathing. There were ten all-year baths, with a million patrons, and seventeen summer bathing places in Boston, with a patronage of nearly three million in 1914. These include floating baths in the river and sea bathing beaches. Lynn owns a beach that is supplementary to the Boston Metropolitan System, coming within its geographical radius. The Metropolitan Commission conducts Revere Beach, Nahant Beach, and Nantasket Beach, three of the best and most popular bathing beaches in the country. The bathhouses make a charge of 5 to 25 cents for the use of their facilities and are overtaxed on hot summer days. Each beach is several miles in length and on occasion the patronage totals over 100,000.

The beaches of Seattle and New York are the only public enterprises quite comparable to these public baths, but Boston also conducts a unique bath at L Street. This remains probably the one public bath in America where men are not required to wear bathing suits. There are now three separate baths: one for men, one for boys, and the other for women and girls. The patronage is often 5000 a day in summer, and has risen to 22,000, but the bathing continues all winter. The hardy athletes who brave all kinds of weather are called "brownies." A man must be a daily patron for seven months to qualify for this distinction.

The "brownies" wade through the snow and break through the ice for their daily bath.¹

It takes as much audacity to break the ice in Boston Harbor as in the Back Bay.

NEW YORK PUBLIC BATHS

New York State has taken the most advanced step by passing a law which makes the provision of public baths obligatory upon the cities. The statute reads:

"SECTION 1. All cities of the first and second class SHALL establish and maintain such number of public baths as the local board of health may determine to be necessary; each bath shall be kept open not less than fourteen hours each day, and both cold and hot water shall be provided. The erection of river or ocean baths will not be deemed in compliance with the requirements of this section. Any city, village, or town having less than fifty thousand inhabitants *may* establish and maintain free public baths, and any city, village, or town *may* loan its credit or *may* appropriate of its funds for the purpose of establishing free public baths."

The first city in New York State to open a public bathhouse was Yonkers, in 1894. This was followed by Buffalo. Most of the bathhouses built under the New York State law contain only shower baths. New York City has thirteen public bathhouses, containing 1377 showers and tubs, and four pools, patronized by over six million people in 1914. The city spends over one-third of a million a year in operating these bathhouses, which cost \$1,700,000. New York's natatoriums are provided with separate showers and tubs for the two sexes, but the pools are used alternately. The water is changed three times a week, is filtered, and is kept remarkably clean considering the patronage. The buildings are also well ventilated. New York provides floating baths in its rivers, used by over a million bathers in 1914, but these ought to be prohibited by law as the water is unfit for swimming. The school shower baths were used by nearly half a million boys and 180,000 girls in 1914. The new municipal bathhouse at Coney Island contains 850 rooms, each with eight lockers. Those on the first floor are divided between

¹ Several Massachusetts cities own public beaches, but not public bathhouses. New York has built an enormous public bathhouse at Coney Island and Seattle a bathhouse on its bathing beach at Alki Point.



CHARLES RIVER RESERVATION.
Boston Metropolitan Park System.



Courtesy of the Metropolitan Park Commission, Boston.

REVERE BEACH RESERVATION.
Boston Metropolitan Park System.

men and women; those on the second floor are exclusively for women; the third floor is for men. The building is supposed to accommodate 21,000 people in twenty-four hours. It is the intention to keep it open all the time, in contrast with Boston's limited bathing hours at Revere and Nantasket beaches.

All-night bathing may be of both hygienic and ethical advantage to Coney Island.

INVADING THE COUNTRY

Boston, Chicago and other cities have organizations of pedestrians who range far beyond the parks into the environs of the cities. Some years ago a boys' camp was conducted by the municipal authorities of Boston. It failed because of an unpropitious site on a treeless island in the harbor. Philadelphia, through its school authorities, has experimented in a camp for fifty girls. The most ambitious of these projects is the municipal vacation camp of Los Angeles. The playground department manages a camp in the San Bernardino Mountains, seventy-five miles from Los Angeles. In 1911 they began on the seashore this experiment that is now located on twenty-three acres of government forest reserve leased for \$10 a year. At a height of 5000 feet in a pine grove is a tent colony, inhabited by boys and men in July, girls and women in August. Transportation and board for two weeks cost \$7.50. Auto trucks with seats and awnings are the official vehicles for the seventy-five mile journey. Denver's Rocky Mountain parks, nineteen and twenty-five miles respectively from the city, are the goals for hikes taken by playground youth under the supervision of a playground director. A shelter has been built by the city on Lookout Mountain, but the campers spend the night in the open.

It is no longer necessary in our best cities for a boy to be committed to a Parental School to get vocational training. Why should a girl have to become tuberculous before she can go to a municipal camp?

MUNICIPAL DANCING

The extreme libertarian and "Billy" Sunday both have their guns spiked by the municipal dance. The ultra-evangelical

type objects to all dancing. The "personal liberty" devotee objects to any regulation of conduct. Both have a false perspective of the need and danger of the dance. Under ideal industrial, social, and housing conditions full liberty might be granted individuals. But the commercial dance has proved an unmistakable menace to youth. The dance is not only one of the oldest forms of recreation: it is peculiarly desirable in the monotony of sedentary and congested city life. The unconcern of the municipality for the amusement of its citizens has permitted the growth of the public dance hall which has been supported by the satisfaction of thirst resulting not from the joy but from the heat of the dance. Dance halls have been usually either connected with saloons or made profitable by drink. There have been some admirable commercial dance halls in cities and at urban resorts. There have been also many dance halls that were mere recruiting stations for vice. The municipality has begun to meet the issue by (1) supervision of halls, dances, drink and patrons, (2) public chaperonage, (3) public dances.

There may be danger in censorship whether of press, theater or dance hall, but censorship admits social responsibility. It can no longer remain negative.

Municipalities have tried to regulate commercial dancing by separating it from intoxicating beverages, by insuring sanitary and fire-protected halls, by prohibiting objectionable music and dancing. Kansas City, Missouri, through its Public Welfare Department, has enforced reasonable restrictions with unquestionable benefits.¹ The city of Cincinnati, under the supervision of the Women's Civic Commission, has given dances in the Music Hall on Saturday nights. A children's dance has also been conducted Saturday afternoons. Twenty-two dances, attended by 14,000 people at an admission fee of fifteen cents, brought a slight profit in 1913. Soft drinks and ice cream were served by a concessionaire. No return checks were given.

The first municipal dance seems to have been held in Milwaukee under Mayor Seidel's administration. Twenty-five cents a couple was charged; there was public chaperonage; the dances grew steadily in popularity. On Mayor Seidel's defeat for reelection in 1912, the reactionary administration

¹ See p. 167.

discontinued the municipal dances. The chief success in municipal dances has been enjoyed by Cleveland. Mayor and Mrs. Newton Baker led the grand march at the first municipal dance in August, 1912, at the Edgewater Pavilion. There had been a peculiar need for municipal dances as thirty-two private dance halls had been closed because the buildings or conditions made them undesirable. The schoolboard halted as usual about the use of the school auditoriums. Mayor Baker met the emergency by improvising halls in two park pavilions. According to Cleveland's precedent in street railway fares and electric lighting rates the charges were set at three cents a dance and three cents for wardrobe privilege. Thus a five-minute dance was given for three cents in competition with the commercial rate of five cents for three minutes. The first dance brought in nearly \$350 from 11,630 dance tickets. Afternoon sessions have been held for children. Minors under eighteen, unless with responsible chaperons, are excluded after 9 P.M. The orchestras are excellent; the police supervision greater even than at private dances; light refreshments are served under a concession. The dances are unfortunately limited to the summer. In 1914 the profits were \$15,000.

While the school board allowed itself to be enmeshed in legal technicalities, the mayor met the emergency as a statesman would.

Chicago has followed Cleveland's lead. The need was very great, as rigorous restrictions have been imposed upon dance halls and restaurants where liquor is sold. The newspapers of Chicago printed on December 2, 1914, an invitation that read:

The City of Chicago invites you to attend the first municipal dance to be given under the auspices of the Department of Public Welfare at Dreamland Hall, West Van Buren and South Paulina streets, to-night at 8 o'clock. Admission, 15 cents.

CARTER H. HARRISON, *Mayor.*

Mayor and Mrs. Harrison led the grand march. Volunteer chaperons assisted Mrs. Lenora Z. Meder, Commissioner of Public Welfare, and Philip W. Trout, Director of Dances of the Commission. Over 5000 people danced the old dances. The first ball was restricted to the old dances, but the director set to work to train people so that the new dances could be

included in subsequent municipal balls. Chicago has also made abundant provision for free dancing by recognized clubs at its playground field houses and public schoolhouses.

Boston's Park and Recreation Department has conducted municipal dances in the city's gymnasiums. The Board of Supervisors of San Francisco have not only used the new Civic Auditorium for paid dances, but inaugurated free street dancing. The municipal band performs from 8 to 11 o'clock on certain evenings on well paved streets under police supervision.

It must be admitted that the municipal dance does violence to class consciousness.

MUNICIPAL MUSIC

The unmusical American is awakening. Symphony orchestras and grand opera are still the exclusive possession of a limited public in the big cities. Church music is still generally little better than rag time; there is not yet a national anthem worthy of the name, and American audiences vicariously stand when the Star-Spangled Banner is played or applaud Dixie because they are accustomed to express patriotism and music by proxy. Nevertheless, high school orchestras and choruses multiply,¹ band concerts are nearly universal in the city parks in summer, organ recitals are given free in favored cities, and cheap music of a high order is becoming part of the winter program.

American aspirations are becoming articulate.

Atlanta, Pittsburgh and Portland, Maine, are not alone in their public organs and organists, but they are notable. Concerts are given daily in summer in the new Portland auditorium. The organist, Will C. Macfarlane, employed by the city, plays the public organ given in honor of the composer, Hermann Kotzschmar, by his namesake, Cyrus H. K. Curtis. Mr. Macfarlane gives his time exclusively to this function and musical composition. On Sundays in winter the Music Commission also plans programs, including congregational singing and addresses. Pittsburgh is the pioneer city to provide public organ recitals. Mr. Carnegie has equipped both Pittsburgh and North Pittsburgh (the old city of Allegheny) with municipal organs. In February, 1914, the one-thousandth semi-weekly

¹ See pp. 183, 184.

recital was given in North Pittsburgh after twenty-four years of public education. The organist, Caspar P. Koch, like his colleague, Charles Heinroth of the Pittsburgh Carnegie Institute, is both a musician and an educator.

Pittsburgh sounds better than it looks.

Boston supplements the privately sustained symphony orchestra by worthy orchestral concerts supported by the municipality. With an appropriation of less than \$20,000 band concerts are given Saturday and Sunday afternoons in summer and orchestral concerts, organ recitals, and music lectures are offered in the winter. One hundred and twenty-eight concerts invited such an attendance that the cost to the city per auditor was less than five cents. In its endeavor to provide free music Boston's municipal orchestra does not serve the people as well as Cleveland's. The best music is given in Cleveland by a municipal symphony orchestra at Keith's Hippodrome. The admission is 10, 15 and 25 cents. The city appropriated \$16,500 in 1914 and the deficit was met by private subscription.

Denver has a municipal orchestra that gives high class concerts in the Municipal Auditorium on Sunday evenings in the winter. Denver's chief summer music is performed on an island in its City Park. The best bands in America have appeared there. The municipal band now plays daily in summer at this park, weekly in two others, and gives twenty Sunday afternoon concerts in the Municipal Auditorium. The expense is divided between the city and the street railway company. The Houston Municipal Band gives free concerts on summer evenings at the small parks and school grounds. On Sunday the concerts are given in the Sam Houston Park, the city's largest park. It is probably not surprising that the Sunday concerts in the Milwaukee municipal auditorium should have been improved by submitting the choice of selections to a referendum of the people. A symphony orchestra of fifty pieces is supported by fees of 10 and 25 cents, the deficit being made up by the city.

The music stands in Golden Gate Park, San Francisco, and the Common, Boston, are monumental witnesses to popular music.

New York furnishes more municipal music than any other city, but the popular demand far exceeds the appreciation of the city fathers. The people have responded to the music of

seventy bands playing in the parks and on the recreation piers, the appropriation being \$100,000. A daily concert is given on the Mall in Central Park during the summer months. The slashing of the budget has eliminated the recreation pier concerts, but the popular demand is unabated.

The municipalities are learning that the people want good music, that it cannot be supplied commercially, but that the people are glad to pay what they can. The city's function is to underwrite the cost of the best music.

MUNICIPAL AUDITORIUMS

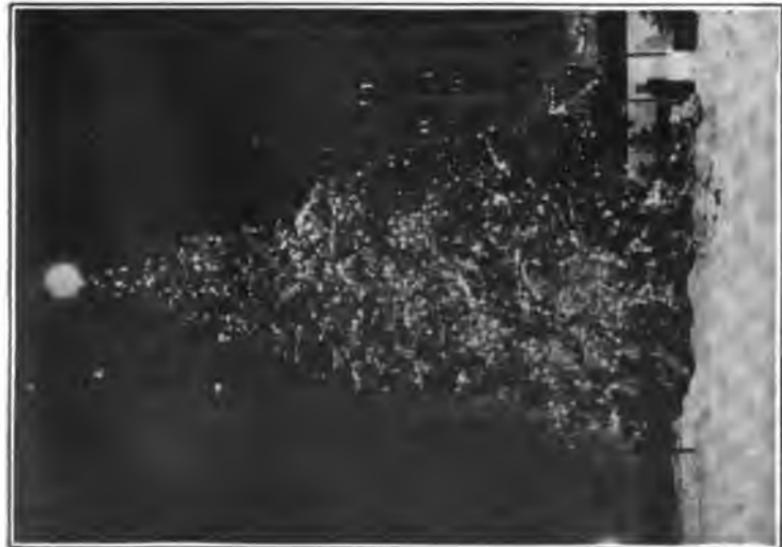
The sepulchral character of most churches and public buildings during the larger part of the twenty-four hour day is being transformed by new spiritual, intellectual and social interests. Many communities still own town halls, convention halls, high school and library auditoriums, that are of little more use than the parlor of a farmhouse. The unawakened public servants of a somnolent public hold these sacred spaces in reserve for town christenings or funerals. The joy of the city is penetrating these gloomy places and throwing light into their shadows. It is a common practice in some cities to encourage the public use of the high school or library auditorium.¹

New England communities usually have a town hall that is available for all kinds of public meetings at a modest rental. Boston has a number of imposing ward halls. For strictly municipal functions it is generally free. In some places its use as a theater is promoted by the officials. A number of New England towns are still governed by the town meeting of citizens, gathering in the town hall at the annual and adjourned meetings, and voicing the sentiments of the voters, *vive voce*. The gallery is then reserved for non-voters — women and children. Winchester, Massachusetts, in addition to many semi-public uses of its Town Hall, holds a "June Breakfast" there. On the first Saturday morning in June the Visiting Nurses' Association is responsible for serving breakfast from six o'clock on to all comers at twenty-five cents a head. A large proportion of the population — men, women and children — join in this community breakfast.

¹ See pp. 246, 247, 253. Also Chapter XIV.



Photograph by Arthur L. Treadwell.
**WILL C. MACFARLANE, MUNICIPAL ORGANIST AT THE
KOTZSCHMAR MEMORIAL ORGAN, CITY HALL AUDI-
TORIUM, PORTLAND, MAINE.**



Photograph by M. Rosenthal.
**COMMUNITY CHRISTMAS TREE, MADISON SQUARE,
NEW YORK, 1913.**



Some day the breaking of bread together may be the holy communion of holy communists.

Among the many auditoriums built by cities in recent years, those at Denver, San Francisco, and Houston are notable. Denver's Auditorium, like St. Paul's, is elastic. By the movement of the boxes and proscenium arch, the room may be adapted to audiences of from 3500 to twelve thousand. This is a great advantage not enjoyed, for example, by San Francisco and Wichita, where ordinary audiences are lost in the mammoth auditorium and the acoustics are abominable. Denver's Auditorium is regularly used for Sunday municipal concerts. It was leased for a time to a theatrical manager who gave daily performances at modest charges.

San Francisco has received a beautiful auditorium as a perquisite of the Panama-Pacific Exposition. It is handsomely and appropriately located, facing the Civic Center, companion to the majestic City Hall. There are smaller halls in addition to the huge hall, committee rooms, and offices in the building. Seventeen entrances have been provided in the front of the building and four on each side. The seating capacity of the floor of the main auditorium is five thousand and of the galleries six thousand. A building costing nearly two million dollars is thus embellishing the city. The dispute between the large subscribers and the little subscribers to the Municipal Opera House is settled by substitution, but only Wagnerian voices can be heard in the Auditorium.

Most large municipal auditoriums are white elephants unless the community can sing as well as pay the piper.

Houston has a large auditorium with better acoustics than its rivals. It is regularly used as a social-center meeting place. Sunday afternoon concerts and lectures are given under the direction of a municipal officer, who happens to be a local minister. Having persuaded his reluctant fellow-ministers to yield the monopoly of the good uses of Sunday, he has built up the chief municipal forum in the United States. In addition to special concerts, the municipal orchestra plays before the lectures. The people also sing.

Municipal and private auditoriums will be better built when the people know what to do with them.

MUNICIPAL THEATERS

Many municipalities rent their town halls or opera houses to theatrical managers or companies without making any attempt to improve on the commercial methods. The most widespread effort to approach the municipal theater has come with the endeavor to improve the character of the motion-picture theater. Biggs, California, is one of a number of communities running a motion-picture theater for educational purposes. Passaic, New Jersey, under the auspices of the commission government, has undertaken Sunday "movies." The first of the free exhibitions is said to have drawn six thousand people. St. Louis in the summer of 1914 employed a portable exhibition booth, carrying lantern, films and curtain, to give entertainments in the parks and playgrounds. Fourteen such centers enjoyed fifty-six fortnightly entertainments. Some educational films, such as "Safety First," "The Fly," "Clean Milk," and "Child Labor," could be included within their \$2000 appropriation.

The municipal "movie" at least has a curtain in common with the municipal theater abroad.

Several American cities purport to have genuine municipal theaters because dramatic entertainments are given in a municipal building. The private organization purveying high class drama in Pittsfield, Massachusetts, may rightly be said to conduct a *civic* theater. Concordia, Kansas, is one of several cities claiming to have the first municipal theater. Hennessey, Oklahoma, owns a municipal theater; the attractions are booked by a member of the city council. Richland Center, Wisconsin, had to promote legislation for the state in order to operate its new municipal theater without leasing it to a private theatrical company. Red Wing, Minnesota, enjoys a bequest of \$80,000 from Theodore B. Sheldon, given to found a municipal theater not to be used for private or public gain. This city of 10,000 inhabitants does not support its own company, but a citizens' committee does the booking. This Sheldon Auditorium Board of five members, nominated by the council and appointed by the mayor, holds office for five years. In spite of their selection of superior attractions, the enterprise has paid interest on the investment. Like many a commercial playhouse it has temporarily succumbed to the motion-picture craze.

Red Wing doubtless had the first municipally administered American theater, established in 1904.

The Northampton Players in the Massachusetts city of that name constitute the first municipal company. In 1892 Edward H. R. Lyman, a Northampton merchant, impressed by the educational value of municipal theaters abroad, built for his town a theater, secured the legislation necessary to operate it and endowed it for three years. The deed of gift provided that the building should be "devoted and used wholly and exclusively for the delivery of lectures, the production of concerts and operas, and the representation and delineation of the drama of the better character." A committee of five self-perpetuating trustees was to administer the gift. This board must include the mayor of Northampton and the president of Smith College. For twenty years the theater had been successful in following the commercial methods. The deterioration of the stage under the incubus of New York management led to the consideration of the desirability of operation, as well as ownership, of this municipal plant. In March, 1903, plays were given on half the evenings of the month. In March, 1912, three plays and two days of Dante's *Inferno* (motion pictures) represented the decline of the commercial possibilities of the Academy of Music.

Northampton's experience leaves no doubt of the blight of New York on the American theater.

Miss Medella L. Peck, head of the Department of Spoken English in Smith College, urged the organization of a permanent stock company. Mr. Frank Lyman, son of the owner of the theater, underwrote the venture to the amount of \$6000 a year. The first year \$5000 of this was needed, the second about half, the third the municipal council assumed the responsibility. Mr. Bertram Harrison was made manager. Miss Jessie Bonstelle gathered the company and they have had three successful seasons — October through April, six evening performances and two matinees weekly. The fear that the high-brow element would predominate has been relieved by a sufficient sprinkling of farces and melodramas in the repertoire. The fear that popularity would preclude the use of the best plays is answered by the inclusion of Shaw, Maeterlinck, Barrie, Pinero, Oscar Wilde, Zangwill, Mrs. Trask and many other notables. Traveling companies are still enjoyed by letting the stock company lie off a night or visit neighboring communities.

The best is good enough for the public.

The Northampton theater program contains advertisements, the profits from which swell the theater funds. It includes a page asking auditors to express their preference of plays to come and sums up these preferences on another page, indicating the possibility of meeting the public demand. The Citizens' Committee, appointed by the Northampton Board of Trade, appeals on another page for pledges for the coming year. There is also given a trolley schedule to neighboring towns, for this community of 20,000 is the center of an urban district three times as large. In spite of the response from "the very best families," the artisans, the students and faculty of Smith College, and the people from neighboring communities, it was only in the third season that Miss Bonstelle was able to consummate her ideal of free Sunday concerts.

The American Municipal Theater is the antidote to commercialism and dilettantism.

SUNDAY RECREATION .

A blight is cast upon Sunday in many parts of the country by antiquated blue laws. Cincinnati and San Francisco have an open Sunday that is almost as immoral in its influence as a Pittsburgh or Philadelphia blue Sunday. There is very little rational treatment of the day of rest. In the theologically backward South many cities have theatrical entertainments and baseball games. In North Dakota the prejudices of communities that have only recently lost their free frontier character forbid Sunday amusements. Colorado Springs voted adversely on Sunday movies in the spring of 1915. Massachusetts cities are just evenly divided on Sunday performances. Boston's playgrounds, like Jersey City's, are shut tight on Sunday, while that is Chicago's best day.

Boston eases the Puritan conscience by licensing Sunday "shows."

The conscience has tightened recently and the Sunday tax has been raised from five to ten dollars a performance. An increase of \$23,000 a year in the income of the city treasury promises such reassurance to the morals of the city that religious organizations have been asked if they will tolerate the theaters

opening at 6 instead of 7 Sunday evenings. Other concessions to the scruples of the American people are the prohibition of legitimate plays or any involving costumes and scenery (because, of course, they could not be "Sunday Concerts") and the requirement of longer skirts on the women on Sundays than weekdays. Under these circumstances twenty-two out of forty-six Boston motion-picture houses voluntarily remain closed with the wicked theaters. Connecticut has recently emancipated its cities by defining permissible Sunday occupations. Even with undue restrictions on individual liberty, the joy of the city will be enhanced by wiping out the hypocrisy of old blue laws and substituting a modern compromise. Sunday amusements multiply.

"The sabbath was made for man, not man for the sabbath."

FESTIVALS

The joy of the city has been expressed for years by local festivities, some of which have attained national fame or notoriety. New York's New Year's Eve and election night debauches have been notorious but spurious vents for joy. Philadelphia's New Year's Day hilarity has been joyous in a juvenile sense. New Orleans' Mardi Gras may invite excess, but it enjoys a distinction to which its imitators vainly aspire. Cincinnati's biennial music festivals are of a still higher order if not so gay. Pasadena's Rose Carnival has a national reputation. Many cities have organized worthy celebrations of their centennial or other significant anniversary. The most important of these ventures, from the standpoint of a healthy municipal life, are the annual celebrations like the Fourth of July or Christmas.

The Safe and Sane Fourth of July was inaugurated in Springfield, Massachusetts, in 1903. Five years later only three other cities had followed. Ten years later nearly four hundred cities were in line. In 1908 there were reported 5623 serious accidents in the United States resulting from the old-fashioned Fourth. In 1913 only 1163 such accidents were recorded. The saving of life and the protection of body were not the only negative gains. The reduction in the number of fires was significant enough for the National Fire Protection Association to engage in propaganda for a Safe and Sane Fourth. Positive gains have

been as inspiring if not so momentous. Public, in lieu of private, fireworks promote community spirit, as well as personal longevity. Games, sports, contests, music, pageants, even speeches, take on a gala character when the community concentrates on the Common or in the Park instead of dissipating in the private yards.

It has been the practice in Rochester to celebrate Independence Day by a banquet to the citizens who have come of age since the last "Fourth."¹

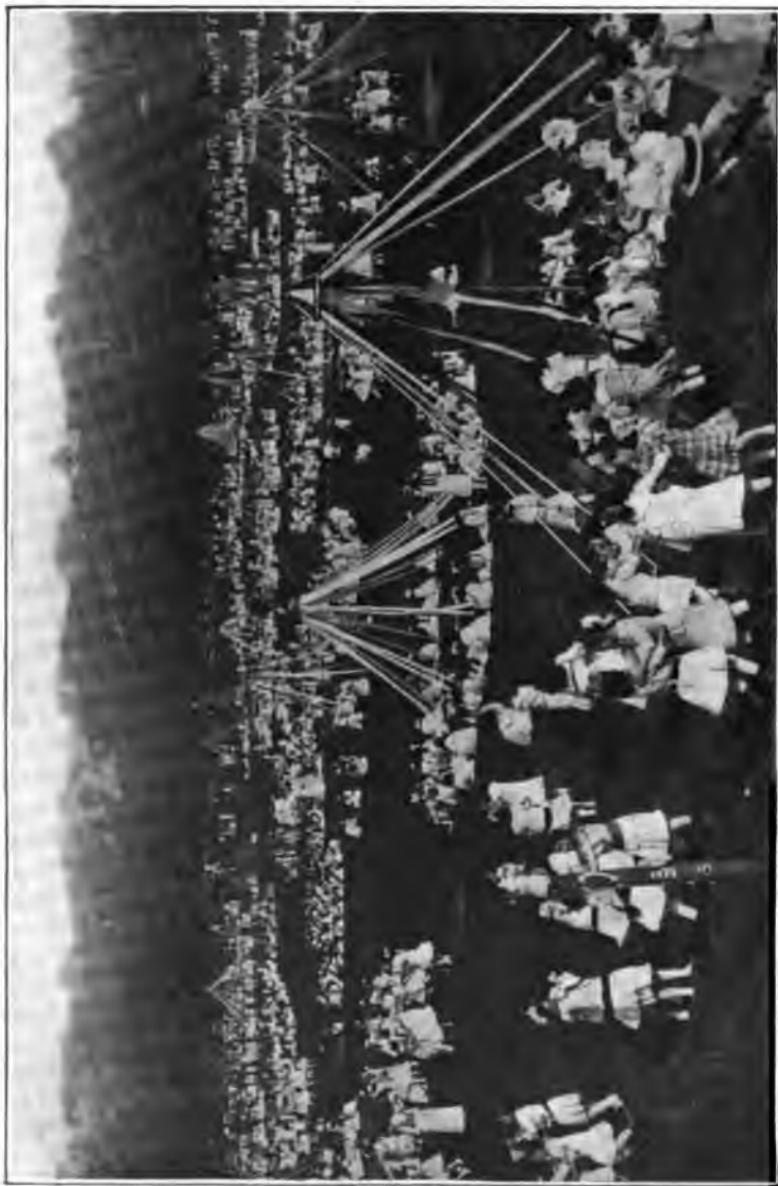
The Community Christmas is another great event of the year that is being saved from banality by not confining it to the home. The SPUG² movement takes away the perfunctory character of Christmas but leaves presents as the chief symbols. The custom has never died out in Boston and other New England communities of Christmas waits and carols and the lighting of candles in the windows. In some cities now the church choirs sing in neighborhoods and then unite at the Community Christmas Tree. This is one of those instances of spontaneous community combustion that testify to the joy of the new era. New York claims to have had the first Community Christmas Tree, inspired by that Danish Pied Piper of the East Side, Jacob Riis. The transformed or rescued Christmas now ranges from the snow-bedecked trees of Boston and New York to the sun-warmed trees of Riverside, California, and Balboa in the Canal Zone. A typical community program is that of the town of Weymouth, Massachusetts. "The Spirit of Christmas" was the title of a pageant arranged and directed by a local woman. The pageant was presented by many performers, grouped to represent agents and agencies of Peace, Prosperity, Pleasure and Plenty. Music and dancing were included and the entire town gathered on the Common.

The Community Tree bears different fruit from the family tree.

Cleveland, as usual, gave its own particular interpretation to this movement. The charitable organizations that are in the habit of serving the poor at Christmastime pooled their interests. A Community Christmas Committee, appointed by Mayor Baker, made a united appeal for funds to promote Christmas cheer. Preferred stock was sold in "Cleveland, the City of

¹ See p. 265.

² Society for the Prevention of Unnecessary Gifts.



Copyright by Underwood and Underwood, New York.

10,000 SCHOOL CHILDREN HOLD ANNUAL FÊTE IN CENTRAL PARK, NEW YORK, MAY 11, 1915.

Good Will (Unlimited), incorporated under the laws of the commonwealth of Good Cheer." Holly-bordered certificates indicated that :

"The holder of the preferred stock shall be entitled to dividends payable daily in the form of the happy voices of robust children, the contented faces of friendly fellow citizens and the general well-being and advancement of the said City of Good Will.

"The capital herewith subscribed is to be turned over to the treasurer of the Cleveland Federation for Charity and Philanthropy for . . . investment in other works continuously expressive of the Christmas spirit of good will towards men. Dividends as above specified are guaranteed to holders of this preferred stock during three hundred and sixty-five days from date, after which this certificate requires renewal."

Forty-five hundred people bought \$12,000 worth of stock and cheered 13,000 families.

The Chicago Playground Festival grew out of the popular patronage of Chicago's great playground system. Beginning in 1907 a day has been set aside when juvenile and adult games and dances are presented by representatives of the different neighborhoods and various nationalities of Chicago. Out of its cosmopolitan mixture Chicago has produced one of the most picturesque of festivals and one of the most hopeful tokens of the American genius for assimilation.

The festival has been put within reach of all schools and communities through its elaboration and performance by the Ethical Culture Schools of New York under the guidance of Percival Chubb. What has been done sporadically or accidentally elsewhere has been done systematically and comprehensively in New York. The May Day Festival in Central Park is an inspiration and incentive appropriated by the municipal school system.

A novel, perhaps unique, celebration is the Mount Rubidoux Pilgrimage commemorated by the people of Riverside, California, and neighboring communities. On Easter morning the rising sun is saluted from the top of Mount Rubidoux. The new year is probably nowhere more significantly welcomed. A stream of pilgrims begins in the middle of the night to mount this hill that rises abruptly from the level valley. There is a beautiful automobile road, making the ascent easier for less devout pilgrims. As the sun begins to rise a little prayer is

said by the leader, standing by the cross on the summit, old universal hymns are sung, and Dr. Henry van Dyke's "God of the Open Air" is read.

The attendance at this sunrise ceremony of the vernal new year of 1915 was reported to be not less than 10,000.

PAGEANTS

A few years ago it was customary in American dilettante circles to jest about the epidemic of pageantry in Great Britain. Since then America has become infected and the pageant is now one of the most seriously regarded institutions of joy in the cities of the United States. A list of the municipal and civic pageants that have already been produced has been compiled by the American Pageant Association.¹ Arlington, Massachusetts, seized the opening of its new town hall in 1913 to present a pageant representative of the topographical and historical significance of the community. More than five hundred performers participated. Part I emphasized the fact that Arlington is the center of some of the richest market gardens in the world, and so its subject was The Sowing of the Seeds of Civilization, based on the story of Ceres and Proserpine. The Second Part dealt historically with The Transplanting and Flowering of Old-World Seed in the New.

The unifying force of such a pageant is a benediction to the community.

The greatest pageant the new spirit of the city has inspired is undoubtedly the St. Louis Pageant of 1914. Miss Charlotte Rumbold, of the St. Louis Public Recreation Commission, and a group of coworkers were responsible for initiating a community endeavor that quite outranked the Louisiana Purchase Exposition as an expression of civic life. In the huge amphitheater of Forest Park, where the Exposition was held, a stage was erected on which 7500 people performed, a cast equal to the attendance at most such entertainments. Nearly half a million people witnessed the performances, 125,000 gathering on one evening. The hours were from 6:30 to 10:30 on five evenings. Half of the seats were free; the other half provided less

¹ A partial list of American cities in which pageants have been performed appears in Appendix 4.

than half of the \$125,000 necessary to produce the colossal spectacle.

The program included the Pageant by Thomas Wood Stevens and the Masque by Percy MacKaye. The Pageant set forth the history of St. Louis from the mound-building era of the Indians to the close of the Civil War. The Masque was a symbolical interpretation of the struggle of civilization, first against the forces of nature, then against the forces of greed. The children of Gold — vice, plague, despair, rebellion — were finally routed by the representatives of other cities summoned by St. Louis to a league to conquer Gold. The music of Frederick S. Converse, the organization of a committee of three hundred to put the pageant through, the esprit de corps of the enormous caste, the unbounded enthusiasm of the host of spectators utilized the pageant and masque to make a permanent civic impression on St. Louis.

St. Louis is for the first time a civic unit.

The utilitarian business man, the class conscious worker, even the social idler, may gain a vision of solidarity in the common use of leisure.

CHAPTER XVII

CITY PLANNING

"God made the country, and man made the town" is an epigrammatic denial of the contemporary tendency to unload responsibility for all human failings on God. The epigram is not only reverential, but scientific. Topography determines the city plan. Whether the plan has scientifically and economically followed topography or has stupidly and willingly violated it, topography cannot be ignored. Cities would not be were it not for natural advantages. As they owe their existence to geography, so they owe what individuality they have to topography. The chief topographical characteristics determining cities are the sea, rivers, hills and plains. It has taken a century of urban development to impress upon city builders the necessity of respect for these natural features to which the cities owe their life and form.

"The stone which the builders refused is become the head stone of the corner."

SEAPORTS

New York is essentially a city on the sea. Its foundations were laid on an island. The chief approaches to it up to the last generation were by water. It has shown about as much appreciation of its maritime parentage as did its ancient Dutch settlers, when they built the high stoop basement houses on New Amsterdam's rocky foundations because they were accustomed to that type on the canals of Amsterdam. New York lacks thoroughfares to get traffic uptown because Randall planned New York's earliest streets to give short cuts to the water front. It is bending its chief energies to-day to connect its scattered boroughs by tunneling water fronts.

Chicago is a city on the sea, owing its location to the im-

portance of Lake Michigan. Yet, like New York, its street plan should have been determined by the rivers that now make transportation difficult. The great Chicago Plan, the most sumptuous design for the redemption of any American city, purposes drawing life from the lake as frankly as though it had not hitherto been held in contempt.

San Francisco is a city on the sea, located on a land-locked harbor, so obscure that its entrance was overlooked by early discoverers. This water front is admirably used for communication with rapidly growing metropolitan suburbs, but San Francisco's streets clamber over the hills instead of circling them. It has done due homage to the sea, but none to the hills. Had the original plan of San Francisco given as great consideration to its many hills as it did to its water approach, it might have been the most beautiful city in the world. San Diego is a city on the sea, languishing a long time waiting for population to fill up its limited but wonderful back country. Now that conditions are favorable for its growth, it has had the wisdom to make the ocean frontage the determining factor in its city plan. Cleveland is a city on the sea that has rapidly outstripped its neighbors because of the facilities offered by Lake Erie. The scientific and artistic improvement of Cleveland now taking form is as obviously dependent on the lake front as its economic development has been.

Buffalo is a city on the sea, planned in 1801 by Joseph Ellictott, who was inspired by the plan of Washington. Like Washington, Buffalo's streets were designed to radiate from the water entrance, as both cities were laid out before the advent of railroads. When the railroads came, they located to suit their own convenience, and the downtown district of Buffalo, following the gridiron plan, grew out of harmony with the original design. After many years of agitation, overcoming the opposition of railroads and citizens, Buffalo promises to revert to its original design, locating the union railway station near the lake front and dealing harmoniously with both its sea and land approaches.

Boston is a city on the sea, a good part of the downtown district having been redeemed from the waters in Dutch fashion. The heart of Boston is the Common, bordered by Tremont Street, named for the three mounts that marked the land rising from the swamps or fens, which were filled in to make the busi-

ness district of Boston. The Charles and Mystic rivers help to add to Boston's water front and make its street plan difficult. The streets of old Boston converged from the water front on three sides to the old State House. Boston has so outgrown this little neck of land that its streets largely follow contour lines, so that the hills have much more to do with the street plan of Boston and its suburbs than has the sea.

Still, since 1775 American cities have owed a great deal to Boston harbor.

RIVER CITIES

Detroit is a city on a river without the great natural advantages of Pittsburgh or Cincinnati and without their topographical difficulties. Detroit is one of the few cities in America to benefit by an original city plan. At first built as an ancient French city with streets twelve feet wide, it had the good fortune to be devastated by a fire in 1805. Territorial Judge Augustus B. Woodward planned the rebuilding of Detroit, following the lines of Washington. There are two radial points. From Grand Circus — a half circle — broad avenues 120 to 200 feet wide radiate and meet the cross streets, 80 to 100 feet wide, that radiate from the Campus Martius a half a mile toward the river from Grand Circus. The Campus Martius is an area 600 by 400 feet, upon which is the city hall, and it remains the center of Detroit. Woodward Avenue, a thoroughfare 120 feet wide, runs from the river through both of these focal points dividing the city.

New Orleans is another city on a river, utterly dependent upon the river, but with a plan so weird in its violation of the laws of nature, that it makes a sorry contrast to Detroit. New Orleans lies several feet below the Mississippi, protected by levees. The river makes an S, which New Orleans tries to follow by streets running at right angles to the stream. The old French town radiated from a tentative center where are congregated the Southern Pacific Station, the United States Mint, the archbishop's residence and the French market. The new town radiates against the traffic and toward the river from a point inland, curiously if opportunely beginning at the junction of Venus and St. Peter streets!

Whether these streets were named subsequently or prior to

this misadventure, they lead from nowhere to the river, instead of from the river to somewhere.

Harrisburg, a city on a river, had the good fortune to possess city fathers who preserved a thoroughfare along the river — Front Street. The public thus has access to most of Harrisburg's waterfront, although that was the only respect paid to the Susquehanna River until Harrisburg began to be redeemed in the twentieth century. Minneapolis and St. Paul owe their existence entirely to the Mississippi, St. Paul being at the headwaters of navigation and Minneapolis at the falls that give power to its mills. Both cities have profited slightly by having their streets determined by the river, and both are now respecting the river banks by incorporating them so far as possible into their park and boulevard system. The original plan of Washington gave due reverence to the Potomac and Anacostia rivers, that meet to make the peninsula upon which Washington is located, and L'Enfant planned a canal to be an organic part of his city plan, on the presumption that transportation was to be by water.

Philadelphia is a city located between two rivers and disregarding them as cavalierly as if built in the age of flying machines. William Penn centered Philadelphia arbitrarily, planned cross streets on the points of the compass, ran all the other streets parallel to Broad Street or Market Street, established public squares at the intersection of these main thoroughfares, and at the four corners of the presumptive city, and presto the Quaker City was!

Philadelphia was originally built on the square.

HILL CITIES

Boulder and Colorado Springs are cities on the hills, singled out from their sister cities because these beautifully located places in Colorado are trying to live up to the beauty of their foundations. The hills and mountains serve as background to these cities for the most part, so that the adaptation of their street plans has been an afterthought. Portland, Oregon, has tried to accommodate itself to its hills and its mountain outlooks, while Seattle has tried to accommodate the hills to it by washing them down to make a level business center. Reginald

H. Thompson, city engineer, has washed away by hydraulic pressure 16,000,000 cubic yards of obstructive hills. Fifty-five acres adjoining the business area have been leveled. Seattle's streets have come down as much as 90 feet. Among American cities that have had due reverence for hills before the development of remoter suburban areas are Lynchburg, Birmingham and Winston-Salem — all in the South.

The gridiron plan of William Penn has been superimposed upon some of the most beautiful topography in the world.

PRAIRIE CITIES

The cities on the plain have a simpler task, requiring only due recognition of their economic functions. The ability to locate arbitrarily for the sake of convenience proved no advantage in the early planning of American cities. A city so old as San Antonio is just beginning to widen its ancient Spanish streets, planning to utilize the limitless land of that southwestern empire. Los Angeles, with a magnificent background of mountains, is located on the plain so that the street problem is a simple one. Yet no city has dealt more unwisely with its additions and subdivisions than has Los Angeles. There are not half a dozen thoroughfares in Los Angeles, because each subdivision was built without regard to its predecessor; every long street is full of jogs. Still Los Angeles has annexed land on the sea nearly twenty miles away, and plans its future with reference to its topographical advantages.

Sacramento, a capital city in a great level valley, was without beauty until it awakened to the new civic movement in the twentieth century. Rochester, New York, is one of the most beautiful cities of the plain, a city legitimately calling itself the "Flower City." It has endeavored to use its commonplace topography for excellent landscape gardening. Its original city plan, however, lacked economy, like those of its sister cities, and the fundamental changes to enable Rochester to avail itself of its topographical simplicity are still to be made.

Pasadena tries to make up in profuse planting for its monotonous planning.

BUSINESS

Whether a city is located on sea or river, hill or plain, its social functions are the same as those of other cities. It must care for business, communication, public life, residence and recreation. Most cities have sacrificed not only beauty but economy to the assertiveness of industry and transportation. Unless a city is a residential or capital city, its first concern is business. Yet business men have been the chief enemies of economy in cities. Even cities that have been totally sacrificed to industry, like the mining and factory towns, have lost far more than they have gained by uneconomic plans. Notoriously hideous cities, like Youngstown and Butte, are so filthy and ill-designed that their losses mount into millions, directly due to the able men whose petty industrial processes have injured the cities in which they live and gain their incomes. Even quite small cities now have a chamber of commerce or board of trade designed to further their business interests. In most cases these organizations are not conscious of the fact that their existence is due to the larger economic vision of these latter days. Increasingly, however, their organization into committees indicates an appreciation of civic responsibility.

Baltimore has a factory site commission, which performs for the city the function commonly performed by a committee of a chamber of commerce. Eight hundred thousand pieces of literature have been distributed, showing Baltimore's business opportunities. By pamphlets, circulars and maps Baltimore is making itself known throughout the country. Newark, New Jersey, by billboards attracts the attention of travelers to its factory sites along the new municipal docks.

The attention many cities have given to transportation rates might have been more economically given to the cost of cartage.

Some few cities have actually planned industrial and business districts. The states of Wisconsin and Minnesota have authorized cities to set aside exclusive districts. The city of Minneapolis has availed itself of the Minnesota law establishing industrial and residential districts. Los Angeles has gone beyond any American city in the definition of its business areas. Most of the city is reserved for residence. In addition to certain public industrial areas, aggregating not more than one-tenth of

the area of the residence district, exceptions are permitted in the residential section. The largest industrial district measures five miles by two, but there are fifty-eight smaller areas known as residence exceptions, in which certain industries can be carried on if the owners of 60 per cent of the neighboring property frontage give their consent. The use of these sites must satisfy not only the neighbors but the fire commissioners.

Similar legislation in Michigan and Illinois has been declared unconstitutional, but in California, where the people are less dominated by property, the law has stood the test of the highest state courts.

Some cities have created business districts by redeeming land. Conspicuous among these are Tacoma, Oakland and Lynn. Tacoma is built on bluffs rising in terraces above Puget Sound. The low-lying end of the Sound has been filled in by sand pumped from the bottom and a great industrial district is thus created at the head of navigation. Oakland has redeemed an immense territory from San Francisco Bay. Oakland lies on the shallow side of the bay and the transportation lines build moles extending a mile or more out into the bay to expedite the ferry service, avoiding the tidal flats. Oakland has filled in to deep water and will have municipal docks rivaling those of San Francisco. Lynn is engaged in a similar endeavor to wrest commerce from Boston by filling in her unsightly mud flats that are left gaping, if not high and dry, at low tide. While New York is compelled by the government to cut its 1000-foot slips into the land and protect the channel of the Hudson, Chicago is planning its docks as extensions of the land into the lake.

The Yankee may not "beat the Dutch," but he is taking lessons from the Zuyder Zee.

THE CITY SKY-LINE

The enthusiasm for the skyscraper office building and the tolerance of the tenement fire-trap pass rapidly as cities gain experience with these menaces to life and property. The skyscraper is an economic burden to every community, and when multiplied penalizes even the owners. In a flash of enthusiasm people rejoice in the first skyscraper that advertises the urban

quality of their community. This fades as the congestion of the streets, the limitation of light and the fire dangers increase. A number of American cities have begun to limit the height of buildings.

Chicago has had a variegated experience, due to an endeavor to meet growing public sentiment, frustrated temporarily by the ambitions of its leading newspaper. A limit to skyscrapers was established and then relaxed in order that this newspaper might erect a taller building, and then a lower level was resumed again. No building higher than 200 feet may now be erected in Chicago.

Boston was a pioneer in limiting the height of buildings owing to the limitation imposed by the state legislature on the height of the buildings about Copley Square. This height was set at 90 feet. This limitation was not sustained until the courts justified the scaling off of the top floor of a hotel that was indiscreetly built beyond the legal limit. Although the city authorities issued the building permit for this structure, the court sustained the state law and the top floor was sliced off. The hotel found some compensation in opening the only roof garden in Boston, but the beauty of Copley Square is marred because of the failure of property owners to think in the same generation as their contemporary fellow-citizens. From this isolated instance, Boston moved on to the securing of legislation for the general limitation of buildings.

Boston has set bounds to the "anarchy of American architecture."

This did not take place until after Congress had imposed limitations on the height of buildings in the District of Columbia. While the buildings are not so restricted in the business district as those of Boston, the residential limitations are more severe. Business blocks are limited in height to the width of the street plus 20 feet.¹ Residential streets are protected by permitting no buildings wider than the street where the street is less than 60 feet in width, and limiting the buildings to a height equal to the width of the street minus 10 feet on streets that are 70 feet wide or wider. On certain important open spaces, which might permit a higher structure, special limitations

¹ On no business street can there be a building exceeding 130 feet in height except on the north side of Pennsylvania Avenue between First and Sixteenth streets, where 160 feet is permitted.

are imposed so that, for example, no building facing the Union Station Plaza may be more than 80 feet in height.

In 1904 Boston was divided into two districts: A and B. In the first — the commercial district — the height of buildings is not to be greater than 125 feet, and in B — the residential section — not higher than 80 feet. This act was amended in 1905, limiting the height of residences in certain districts to 70 feet. Baltimore has limited the height of buildings about the Washington Monument, following the example of the Copley Square limitation in Boston. Indianapolis has made a similar limitation to the buildings on the Circle about Monument Place. Cities of the second-class in New York State may establish residential districts. Syracuse and Utica have availed themselves of this law. The Heights of Buildings Commission in New York City secured legislation in 1914, which gives the Board of Estimate and Apportionment power to create districts with restrictions as to the height of buildings and the percentage of the lot that may be occupied.

The man who would borrow light from his neighbor must reciprocate.

COMMUNICATION

Cities have been laid out primarily for the convenience of property owners. The rectangular building lot simplifies ownership, while requiring the gridiron plan of streets with its wastefulness and inconvenience. Where city blocks are large alleys are possible, and in congested areas these are often turned into streets. The spacious plan of Philadelphia has led to the multiplication of streets and consequent overcrowding. In the most fashionable part of the city the oldest families generally live inadvertently in the slums. The ample squares of Philadelphia have been laid out at the expense of the streets that are generally so narrow that only one car track can be laid. New York's shallow north and south blocks preclude alleys and the streets are wide enough to facilitate traffic. In addition to the streets that New York is pushing through solid blocks to improve its plan, it has recently widened Twenty-third Street and Fifth Avenue by compelling the removal of all sidewalk obstructions, reducing the width of the sidewalk, and increasing the width of the traffic area. Fifth Avenue has been widened from Twenty-

third Street to Fifty-ninth Street — the entrance to Central Park. Livingston Street, Brooklyn, has been widened from 60 to 100 feet to relieve Fulton Street, that formerly carried all the Brooklyn Bridge traffic.

It is the narrow way that leads to destruction in the business district.

Boston has been sadly hampered by lack of thoroughfares. In all its history it has spent 40 millions in street widening. Two streets were cut through blocks to connect busy parallel streets in 1914. San Antonio is one of the old cities where expanding business has been made difficult in a growing city. One of the alley-like Spanish streets has been widened for several blocks until it is a dignified twentieth-century thoroughfare. St. Paul is widening Robert Street at the expense of the property holders by cutting down twenty feet on one side of the street, letting the owners on the other side share the expense. Nashville is finding such satisfaction in Capitol Boulevard, by which it opened up a vista to the Capitol, that the extension of this street from Church Street to Broadway must follow. Capitol Boulevard is already bordered by some stately buildings and its display lighting leads appropriately to the illuminated Capitol.

Baltimore has created the Fallsway over its enclosed creek, Jones Falls.¹

Philadelphia's parkway is completed from Logan Square to Fairmount Park. It terminates at the Municipal Art Museum, which is located on an old reservoir site. The extension of the Parkway to Penn Square in the very center of the city is being pushed. This will give Philadelphia its first direct thoroughfare from the business section to Fairmount Park and the north-western part of the city. Newark is gaining a similar advantage by the construction of Diagonal Street at a cost of \$1,600,000.

Every school child knows the significance of the hypotenuse of a right-angled triangle.

Since Boston leveled hills many years ago there has been no such disrespect shown Nature's protuberances as Seattle has done in washing its hills into the hollows or Pittsburgh in attacking the Hump. Pittsburgh's Hump was an obstacle in colonial days. It has twice had layers taken off the top — in 1837 and

¹ See pp. 100, 101.

1847 — but in the last few years a serious endeavor, involving over a million in damages and nearly \$700,000 in regrading, repaving, and relaying sewers and water pipes, has opened up business streets for Pittsburgh, clearing thirty-five acres and giving it the chance to have a civic center about Richardson's Allegheny County Court House. Seven million dollars' worth of private improvements promptly followed.

Philadelphia, having widened Delaware Avenue for a mile, is extending the improvement two miles more to give itself a worthy waterfront street ranging from 150 to 250 feet in width instead of 50 feet as formerly. Chicago has widened Michigan Avenue from Park Row to Randolph Street along Grant Park. Chicago's task was simplified by being able to borrow from the Park area and not assess the property owners on the west side of the street where the sidewalk has already been widened from 20 to 30 feet. The Michigan Boulevard driveway has been widened from 50 to 75 feet and the sidewalk bordering the park from 12 to 25 feet. Chicago is about to extend this boulevard across the river by a double-deck bridge to complete its boulevard system.¹

Chicago's *Boul Mich* has begun to rival Tremont Street in Boston, Princes Street in Edinburgh and the rue de Rivoli in Paris, each of which is proud of being "only half a street."

Many cities have unused possibilities in the readjustment of transportation that has involved the abandonment of canals. Newark, Ohio, has shown how not to do it by selling canal space so that very shallow buildings bordering on two narrow streets take the place of a possible boulevard and thoroughfare. Jersey City and Newark, New Jersey, have the prospect of wise use of this important space. Rochester, Syracuse and other New York cities will have the Mohawk Valley canal site set free by the new barge canal.

Baltimore has shown that a petrified stream is as beautiful as a petrified forest.

TERMINALS

Washington has the best land entrance and San Francisco the best water entrance in the United States.² Providence

¹ See Chapter XV.

² See Chapter II.



SIDEWALK ENCROACHMENTS, NEW YORK CITY.
East 23d Street from 4th Avenue to Broadway.



REMOVAL OF SIDEWALK ENCROACHMENTS, NEW YORK CITY.
East 23d Street from 4th Avenue to Broadway.

the Pennsylvania Railway Company to locate Chicago's West Side station as well as possible after the Northwestern Station was imposed upon the city. The latter is an excellent building entirely misplaced to satisfy the obstinacy of a big business man of the old school. Boston's business taste has inflicted on the city a skyscraping tower that grows out of the classic base of the old Custom House. A greater architectural monstrosity it would be hard to find. But coincidently with this banality the Bullfinch front of the State House marks a fidelity to original standards that is reassuring.

The artistic blunders of America are not due to lack of tradition.

Among the architectural treasures of cities Independence Hall in Philadelphia and the old City Hall in New York are conspicuous. Philadelphia has restored Independence Hall to its colonial proportions and keeps Independence Square in the rear appropriately beautiful. Not content with this, Philadelphia is planning to clear out half a block north of Chestnut Street in front of the shrine of the Liberty Bell and the scene of the signing of the Declaration of Independence. The City Hall in New York, dating from the beginning of the nineteenth century, is New York's most precious artistic heritage. Walled in by skyscrapers, it maintains its dignity in City Hall Square, about which stately municipal buildings are confronting New York's grandiose commercial structures.

The past is incarnate in the present by recent buildings and monuments of classic mould.

The little art museum of Toledo stands in almost sublime isolation, guarded by dark, protecting trees. Cleveland has a museum in Wade Park, St. Louis a museum in Forest Park, and Buffalo one in its former exposition park, all of which hark back to established standards in their architecture. The Washington Monument in Baltimore, the Washington Arch at the beginning of Fifth Avenue, New York, the Spreckels Band Stand in Golden Gate Park, San Francisco, and the convenience station at the entrance to the business center of Minneapolis all follow classic models.

Many roads still lead to Rome.

Structures now multiply of more independent design. The Chicago field houses in the Chicago playgrounds are dignified

and beautiful examples of plastic architecture. A few are thoroughly modern brick buildings, but most of them grow on the spot out of concrete. The majority, designed by D. H. Burnham and Company, have some concrete or tile ornamentation. Sherman Field House has an auditorium appropriately decorated by Art Institute pupils. The Lion House at Lincoln Park, Chicago, by Perkins, Fellows and Hamilton, is a promising example of the possible beauty in every building that is perfectly adapted to function. Its red brick and terra cotta exterior, its green tile background for the tawny beasts, and its perfect sanitation set standards for human housing. The aquariums of New York and Boston serve their purpose perfectly. These homes of the lower animals have their counterpart in other buildings consecrated to man's humbler needs. The new public market in Cleveland, most of the new fire stations, many power houses, concrete standpipes, and the jail in St. Paul, that is often confused with the leading club, are worthy adornments of the cities.

The newer standpipes are much handsomer than the stock soldiers' monuments.

Among the most beautiful embellishments of cities are bridges.¹ The first Brooklyn Bridge, with its perfect proportions, the majestic High Bridge carrying one of the Croton aqueducts across the Harlem River in New York, and its companion over the Harlem—the most beautiful iron bridge in America—the pillared entrance of the Susquehanna bridge to Harrisburg, and the simple Cabin John Bridge near Washington are examples of the legion of handsome bridges now adorning American cities.

Monuments and sculpture also multiply. The Shaw Memorial on the Common in Boston, the St. Gaudens Lincoln, the Borglum Lincoln, the Cincinnati Fountain in Fountain Square, Lorado Taft's Fountain of the Great Lakes in Grant Park, Chicago, and the Farragut Memorial in Madison Square, New York, are above reproach.

CITY HALLS

Civic pride has expressed itself in some exceptional city halls. Chicago's begrimed city and county building of the later

¹ See pp. 28, 29.

nineteenth century has yielded to a twentieth-century twin building of modern interior convenience and external dignity, occupying a block in Chicago's loop district. St. Louis set its city hall in an open space that is to be the beginning of its great Central Parkway, and East St. Louis has imitated the architecture as nearly as may be in smaller dimensions. New York's mammoth municipal building, built on a scale as titanic as its commercial neighbors, gives impressive background to the charming architecture of the old City Hall.

Alexandria, Louisiana, sets its city hall in a city square with the dignity of architecture and landscape architecture commonly given to the county court house. Meriden, Connecticut, is one of the smaller cities that has set its town hall on a hill. At the convergence of two streets, flanked by churches, the Young Men's Christian Association, and the public library, the colonial city hall occupies an impressive triangle. The municipal group of Springfield, Massachusetts, has established a new standard for the country. The pair of classic buildings — auditorium and city hall — with the Campanile between, located on the river front, facing a city park, advertise Springfield beyond any possible commercial achievement. The latest of the city halls of exceptional beauty is that of San Francisco. As a successor to the many domed blunder of earlier days, this white granite building, occupying a city block and facing the plaza of the civic center, is a symbol of the new San Francisco.

The city fathers command more respect in a dignified city home.

LIBRARY BUILDINGS

The new artistic life of many a community is marked by the building of the public library. It is safe to say that no kind of structure, unless it be the post office, is so likely to give distinction to the small city. The first of these buildings is the Boston Public Library. As a library building, this structure is a failure; as a work of art, it is the chief monument of Mr. McKim of McKim, Mead and White. The façade was inspired by the Bibliothèque Ste. Geneviève in Paris, but the triple entrance and the legend, "Free for All," proclaim the democracy of the American municipal library.

The mural decorations of Puvis de Chavannes, Abbey and

Sargent, and the architectural detail of the façade and inner court, give the Boston Public Library unique distinction.

The most sumptuous of municipal libraries is that of New York. The combined Astor, Lenox and Tilden foundations have provided a storehouse for books appropriate to the location at Forty-second Street and Fifth Avenue. The architecture is pseudo-classic and the generous proportions are no more wasteful than those of the Pennsylvania Railway Terminal. If the building is exceptionally luxurious for democracy's needs, it is less vulgar than the fashionable clubs and restaurants on Fifth Avenue. It gives the masses appropriately the most distinguished building on that avenue de luxe, even if its pagan beauty does not rival that of some of the Christian churches that cater to the luxurious classes.

The rarely beautiful town halls of Italy and Belgium gave the people no such service as they enjoy in the New York Public Library.

St. Louis has made a happy substitution of the new library building for the old exposition building. St. Paul has lost by fire its library, housed above an old market building, and gets a handsome new structure fronting on a delightful little park with the possibility of a vista to the river some day. The Multnomah County Library of Portland, Oregon, is a seemly piece of architecture, admirably appointed for library uses. It includes excellent provision for the staff in contrast with the monumental inadequacy of Boston, Chicago and other older libraries. The legion of smaller library buildings may be represented by Richardson's little gem at Woburn, Massachusetts, the classic structure of Winona, Minnesota, the modern building unconstrained by precedent at Colorado Springs, and the exceptionally decorated building on which Charles R. Lamb, Mrs. Lamb and F. S. Lamb have coöperated in Watertown, New York.

The municipal librarians are a generation ahead of the municipal architects.

SCHOOLHOUSES

The little red schoolhouse is no longer adequate to the country where the centralized school applies the best of urban experience to rural conditions. In the cities the enlargement of the curriculum, the increase in the number of pupils, the improve-

ments in architecture, and the higher standards of taste have resulted in buildings without any historic precedent. Private philanthropy has had no such influence as in public library building, where Mr. Andrew Carnegie has played Santa Claus to a multitude of cities. Philanthropy has occasionally had the wisdom to endow public schoolhouses instead of embarrassing communities as generous, opinionated Stephen Girard did Philadelphia. Menomonie, Wisconsin; Warren, Pennsylvania; and Macon, Georgia, are among the cities that fare better than their neighbors because not limited to taxes for their equipment. The most notable schoolhouses in America are, however, the product of public spirit, public enlightenment and public money.

Chicago's per capita expenditure for high school buildings has quadrupled in fifteen years.

Before this generation the world had never seen such public schoolhouses as the magnificent high school building of Tacoma or the Washington Irving High School in New York. Overlooking Washington Irving's old home at the corner of Seventeenth Street and Irving Place the most urban of high schools lifts its nine stories. It has accommodations for 5000 girls and over 200 instructors. Costing a million and a quarter to build and equip, the Washington Irving High School replaced six schools by housing two schools of 2600. The sessions last all day, the foyers on the first and second floors enabling the two schools to assemble and dismiss without confusion. The building has every facility for the usual feminine vocations. The domestic science department includes a six-room housekeeping apartment. No business college is better equipped for commercial work. The roof is used for both basket ball and gardening. The dining room seats 700. The biological sciences are taught not only by specimens and lantern slides; 150 living animals from the Bronx Zoo are housed in the school's animal house.

The building is so ample in size and equipment that it is naturally patronized a great deal by the general public. The main foyer is known as the Municipal Art Museum through having been used so often for popular exhibitions. The auditorium has served the Educational and the Children's Players and all kinds of neighborhood entertainments. The large gymnasium in the basement is used for municipal dances. Evening

classes, lectures and dances go on simultaneously without confusion.

What would Rip Van Winkle say?

Tacoma took advantage of an over-ambitious railway and seized the incompletely hotel designed for lavish tourist entertainment. The building is fortunately located on a bluff overlooking Puget Sound in sight of Tacoma's snowclad peak. Beside the building is the amplest public school stadium in the country, ideally built in a little canyon or gulch.

A high school building costing several hundred thousand dollars and worth every cent of it to the community is not at all unusual in smaller cities. School architecture has, however, been worked out in twentieth-century terms chiefly in New York, St. Louis and Chicago.

Mr. C. B. J. Snyder, school architect of New York, has solved the difficult problem of that most congested city. The huge high school, like the Erasmus in Brooklyn or the Wadleigh in Harlem, houses more pupils than any other city is called upon to do, without sacrificing safety, hygiene or beauty. The letter H schoolhouse is a happy solution of congestion coupled with the shallow Manhattan city block. This type of building runs through the block, having a court for boys on one street, another for girls on the other street. Thus the city gets two frontages without the expense of a corner lot. Roof playgrounds meet the needs of recreation as well as the expense of land will permit.

The new Flushing High School bears witness to Mr. Snyder's ability to design a beautiful suburban building.

Mr. Ittner has enabled St. Louis to lead the West in the beauty of school architecture. The St. Louis schoolhouses led the country until Mr. Ittner and others began to be summoned for expert aid to other cities. Now the St. Louis type of individualized schoolhouse is becoming ubiquitous. Richmond, Indiana, possesses an Ittner high school with a beautiful bold facade, decorated by bas relief, an art gallery on the top floor,¹ and an auditorium entered by the two corridors that lead from the street. Two sides of the auditorium open completely on these corridors, so that the audience can be turned into them *en masse*.

The Hibbing, Michigan, High School, like a number of Mr.

¹ See p. 263.

Ittner's schools in St. Louis, has been embellished with mural paintings. In this instance, Mr. D. T. Workman has represented in the assembly hall the appropriate story of "Iron."¹

Mr. D. H. Perkins, while school architect of Chicago, established a new standard in the extensible city school building. In growing neighborhoods the central section of a large building is so constructed that additions may be organic. The expenditure may thus be spread out over a period of years, but in the end the economy of large scale construction may be enjoyed. The Chicago schoolhouses have been pioneers in certain invaluable utilitarian methods, such as the cloak rooms and toilets on each floor, the blank wall giving architectural distinction with great saving to the eyes of pupils, and the semi-detached auditorium, gymnasium and work shops. Two of Mr. Perkins's other successes (the work of Perkins, Fellows and Hamilton) have been the one-story schoolhouse and the group plan for large schools. An elementary schoolhouse at Evanston, Illinois, consists of an auditorium as the core of the building surrounded by classrooms, each one of which opens to the beautiful school campus of five acres. The stage of the auditorium is large enough for the kindergarten, can be shut off from the auditorium so both can be used at once, and by its elevation above the remainder of the main floor gives access to a terrace where the little ones can be kept outdoors and still off the damp ground if desired.

It is better for school children to climb trees than stairs.

The second,—the New Trier High School buildings at Kenilworth, Illinois,—is an architectural composition, consisting of main building for conventional studies, flanked by gymnasiums and swimming bath on one side and auditorium surmounted by a refectory and kitchen on the other side. Behind the main building is the manual training addition. Appropriately placed about the fourteen-acre campus are athletic field, tennis courts, gardens and agricultural plot. This high school serves several suburbs of Chicago and is not only a great school, but an important social center.

Rochester, New York, has also attracted attention with one-story schoolhouses. Los Angeles has built several schoolhouses

¹ For a description of Mr. Ittner's Grover Cleveland High School, St. Louis, Appendix I.



Perkins, Fellows and Hamilton, Architects.

A CHICAGO SUBURBAN HIGH SCHOOL GROUP.



Photograph by Poller.

HIGH SCHOOL AND STADIUM, TACOMA.



of two stories on the Mexican patio plan with an interior court. An arcade makes the patio available in inclement weather. Each new school building in Cincinnati is equipped with gymnasium and swimming tank. Every schoolhouse in Little Rock, Arkansas, occupies an entire block. The Abingdon, Virginia, High School stands on the summit of a twenty-acre hill. The Evanston, Illinois, Public School Art Society has authority to supervise and purchase all the school decorations.

The ideal schoolhouse has "atmosphere," and is open to the sun and the public.

CIVIC CENTERS

The individual public building of excellence no longer satisfies the standards of modern city making. The arrangement of public buildings for convenience, beauty and civic inspiration is an old story in Europe. It has been done sporadically in this country. There is now a fine appreciation among all public servants of ability and citizens of taste of the necessity of civic centers. So far has this appreciation gone in Chicago that a movement is under way to promote neighborhood centers that each residence section may have its minor civic center.

The most ambitious grouping of public buildings is in Washington. The nation's capital furnishes analogy for other cities only in the fact that the scientific and æsthetic grouping of buildings is a result of the growing knowledge and taste that have set to work to redeem the blunders of the nineteenth century. The Mall is being cleared of its jumble of nondescript structures. The new railway station not only faces a noble plaza, but looks up a street lined by public buildings to the Capitol and is adjoined by the branch post office. The grotesque symmetry of the classic treasury building and the degenerate French State, War and Navy Department building to the right and the left of the colonial White House will be partly neutralized by the location of harmonious architecture along the Mall and Pennsylvania Avenue.

Civic centers may be parochial or national as well as municipal.

Other capital cities enjoy more or less accidental civic centers, notably Richmond and Lansing. Cleveland and Des Moines were among the earliest cities to plan civic centers in logical locations on the water front. Both of these are still in process

of development, delayed by lack of public funds or private coöperation. The river front in Des Moines has been transformed for a considerable stretch on one side. The library, post office, coliseum and city hall have been built at a cost of nearly one and a half millions and two imposing concrete bridges cross the river. Cleveland's County Court House stands upon the improved lake front; the post office is at the other end of the civic center; the city hall is rising, and the railway station below the bluffs is in evidence. The civic center will ultimately lead from the station and the lake to Cleveland's central square (its local transportation center), and promises to furnish one of the most dignified architectural vistas in America. Cleveland was fortunate in securing the complete coöperation of the Federal Government and Cuyahoga County, which have in fact done their work first.

Cedar Rapids followed Des Moines' lead and promptly used the river for its civic center location.

Denver has been at work some time on its civic center, designed to include the State House, Court House, new library and other public buildings. Unfortunately the post office, a magnificent piece of classic imitation unrelated to anything else, has already violated the scheme. Denver has been sadly hampered by the anarchy in Colorado and the corruption in the city that have blighted its public spirit and caused a grave commercial slump.

Hartford was one of the earliest cities to make a city plan, the outgrowth of an ambition to have a civic center. Bushnell Park, with the capitol, bordered by public buildings, is most happily located in view of the city's railroad entrance. Providence has a more complete civic center, but the railway station is the focal point and beauty is sacrificed to convenience.

The mastery of service is hard to learn.

Brookline, Massachusetts, has beautiful public buildings conveniently located near a pleasing street railway station, but they are so congested that the dignity of a civic center is lacking. Winchester, Massachusetts, has one of the most successful civic centers of the smaller towns. The railway from Boston approaches the town, passing the Mystic Lakes and the Mystic Valley Parkway (parts of the Metropolitan Park system), and reaches the town center and railway station by passing between

a private and a public park for half a mile. The station is backed by the common and the old stately Congregational church. Across from the station is the playground. Crossing a graceful concrete bridge over the Aberjona River, the road passes between the post office and the Unitarian church, and beyond the town's main street runs the Mystic Valley Parkway (leading to the Middlesex Fells). The Parkway is flanked by the town hall, sheltered by stately trees, and the handsome high school standing conspicuously on a hill. The vista of the town hall has for a foreground another graceful concrete bridge and a little pond.

The town greets the visitor with an engaging smile.

New York's metropolitan dimensions make a single civic center inadequate. The old city hall, the new municipal building, the courts and the Brooklyn Bridge terminus make City Hall Park, Manhattan, the logical metropolitan center. Brooklyn had an opportunity to locate a new civic center appropriate to its increasing dimensions. The ancient inertia was too powerful and the old borough hall with new approaches from the bridges will have to serve as the borough civic center. The rivalry of the various boroughs will ultimately result in giving New York several important if not ideal civic centers.

New York presents the familiar paradox of the irresistible force meeting the immovable obstacle.

San Francisco's civic center is planned and assured. Nearly \$12,000,000 has been voted. The auditorium, on the south side of the plaza, and the city hall, on the west, are completed. The former cost \$1,300,000. The latter has cost \$4,000,000 and the interior is not yet finished. The Plaza is already in a beautiful state of cultivation. The state building is to stand on the north and the library to occupy half of the east side. The other half was to have been utilized for the municipal opera house that Mayor Rolfe vetoed when San Francisco's society people tried to exact special privileges from the city. The civic center is almost ideally located, using the three blocks occupied by the city hall destroyed in the fire and adding five and a half by purchase.

Buffalo has decided to solve its transportation dilemma by having the civic center open out of both the passenger and freight terminals, the latter on the lake front.

The most ambitious plans of a municipality are those of Chicago. The report of Mr. Burnham and Mr. Bennett, illustrated by Jules Guerin, is the lavish gift of the Commercial Club. It provides for a civic center near the population center on the west side. This involves such colossal reconstruction that its realization seems remote. The widening of Michigan Avenue along Grant Park and the lake shore, the widening of Twelfth Street on both sides of the river, and the treatment of the lake front and outer park system in accordance with this magnificent twentieth-century plan make it not improbable that the whole project will one day be consummated.

There is nothing petty about Chicago but politics.

RESIDENTIAL AREAS

The establishment of residence districts is a protection against the unexpected intrusion of undesirable businesses. Los Angeles leads in the differentiation of such areas.¹ Every city of any size establishes fire limits, conceding more liberal building regulations to districts in which there are detached houses. Fire and sanitary regulations are more severe in the case of tenements. Building lines usually have to be established by private consent to be safe. Many promising residential sections of detached houses set back from the sidewalk have been violated by the building of apartment houses out to the sidewalk. Gradually the extension of conduits protects residence districts from poles and wires. This is done primarily for economy or safety. The law is still impervious to æsthetic considerations.

Cities have legislated successfully against noise on health grounds, but the eye remains unprotected.

BILLBOARDS

The greatest intrusion on residential privacy is the billboard. Most billboard legislation has been declared unconstitutional. The history of the agitation against billboards reveals an interesting growth of public sentiment and its reflection in a skillful accommodation to legal precedent. Chicago was early in the field with a law restricting billboards on the ground that they

¹ See pp. 331, 332.

were objectionable to property owners or residents. Appeal to the courts showed that "the good old English law" — always a decade to a millennium behind civilization — did not recognize aesthetic emotions. It was difficult to prove that a billboard was obscene and the law did not recognize the objection that the sign might be nauseating. The court decided that if the billboard might conceal thugs or sources of disease or set fire to property or be blown down and destroy life it came within the survey of the law. So Chicago and other cities have passed laws requiring billboards to have an open space below them and at the side and demanding that they be secure. New York City leads in requiring fireproof billboards and braces with a wind resistance equal to their needs, measured by their size and height above the ground.

It has also been found in New York that electric signs may be regulated if they interfere with sleep during the few hours when New Yorkers are not awake.

New Jersey has had some fruitless experimentation in taxing billboards. The court's instinct for property has nearly always been keener than its comprehension of civilization. Using historic police or health powers a public official can sometimes secure justice in spite of the ancient law. The tax assessors of Medford, Massachusetts, tax billboards as real estate, valuing them at the cost of construction. This precedent has not been followed by the assessors of the other Boston suburbs, who have generally admitted their subservience to property owners.

A fight has been waged in St. Louis for years to find a law that the court would recognize as constitutional. An ordinance passed in 1905 was sustained by the Supreme Court of Missouri in 1914. The companies that had fought every restriction by all known methods withdrew their appeal to the United States Supreme Court because that would have embarrassed their colleagues in other states. The ordinance was a very modest one, considering the blight that billboards cast upon neighborhoods. It limited the area of the billboards to 500 square feet, their height to 14 feet, and length to 50 feet. Upon the rendering of the decision the companies did their utmost to have the ordinance repealed by the St. Louis Councils. Two hundred and fifty existing billboards were doomed by this law.

The men who make their incomes from billboards may be

honest, but they are no more susceptible to the claims of civilization than the nation that holds treaties in contempt.

Chicago has served the cause of civilization *versus* the advertising Huns and Vandals by fighting to a supreme court decision a law that lets the property owner decide whether the billboard injures his property. The Chicago ordinance that has supplanted their previous vain endeavors prohibits the construction of billboards in a block in which one-half of the buildings on both sides are used exclusively for residences, without first obtaining written consent of a majority of the owners of the street frontage.

Local option wins when the taste of the people is not yet educated up to enforce prohibition.

RECREATION

The ideal of municipal recreation is a playground within a quarter of a mile of every child and an acre of park to each fifty people. The standard already within reach is a playground (including gymnasium, swimming bath, athletic field, and assembly hall) within a half-mile of every citizen, a social center in every neighborhood, a municipal theater (or at least a motion-picture show), and a rural park within the radius of a single car fare. The two chief purposes of recreation are healthful amusement and team play. It is therefore an indispensable element in the city plan.¹

Recreation is not merely play. Re-creation comes from diversity of occupation relieving fatigue. Monotony and ugliness in a city lay a burden on the people of which they are not conscious. Orderliness, architectural beauty, verdure, vistas, diverting monuments and scenes make life easier and more gracious. The city subtly recreates its population when it is planned for their convenience and enjoyment.

The comprehensive city plan is more important for recreation and rejuvenation than any form of public amusement.

TYPICAL CITY PLANS

Prosaic William Penn in Philadelphia and the triumvirate that laid out Washington, D.C., — Washington, Jefferson and

¹ See Chapters XIV, XV, XVI.

L'Enfant, — are the predecessors of American city planners. Washington is the model city and will probably remain unrivaled while men travel chiefly on the surface of the earth. Under the spell of the newly achieved separation of legislative and executive functions in the Federal Constitution, President Washington wanted this conception embodied in the capital city. L'Enfant located the Capitol on an eminence facing the dawn and placed the President's house a mile back of it, connected by a great thoroughfare — Pennsylvania Avenue. The capital city's functions were to be dignified also by a park running on the axes of these buildings, and at their junction was to be located the Washington Monument. From each building the great avenues would radiate like the spokes from the hub of a wheel. The minor street system was to be rectangular, affording abundant opportunity for ornamentation of the city at the street intersections.

This plan is fundamentally responsible for Washington's beauty and convenience to-day.

The pygmies of the nineteenth century could not grasp it, and so the Washington Monument was put a little out of focus, the treasury building was so built as to obstruct the view from the White House to the Capitol, and a railway station of incredible hideousness was planted on the beautiful Mall between the Capitol and the Washington Monument. It took great courage to return to the majestic original plan, but the commission created in 1900, on the centennial of the establishment of Washington, has gone back religiously to first principles. D. H. Burnham, chairman of the commission, even rid the Mall of the railway station and gave Washington an ideal railway entrance.¹ The new public buildings are being located appropriately about the Capitol and along the Mall.

The plan of Washington fits its functions like the human anatomy.

New York City had its first plan made by a commission appointed by the city council in 1807. The plan, beginning with the irregular village streets at the lower end of Manhattan Island, extended to 155th Street. The commissioners had faith that the city would contain 400,000 people in fifty years. It did contain twice that number. The naïveté of these men, whose

¹ See pp. 13-15.

vision reached to the hills beyond Harlem flats, is revealed in their confession: The gridiron plan was adopted because a city is "composed principally of the habitations of men, and because straight sided and right angled houses are the most cheap to build, and the most convenient to live in."

What would the commissioners have thought of their successors a century later who built a circular court house!

It was not until 1914 that a City Plan Committee was appointed by the Board of Estimate and Apportionment. The intermediate authorities had not seriously altered the plans adopted in 1807 for Manhattan Island. The other boroughs had grown together by natural accretion. Since the adoption of the Greater New York Charter there had been no movement for unification except by underground transit. The City Plan Committee has correlation as its function, but is subordinate in authority to nearly thirty city and borough departments. The committee is wisely setting its staff to work investigating the movement of population, time and fare zones, congestion, vacant land, water front, and other fundamental problems, tabulating and charting their results. The committee in 1914 presented a report, "Development and Present Status of City Planning in New York City." This report is an admirable scientific and diplomatic presentation of the complex problem of city planning. It shows the failures of past ignorance and the difficulty of coöordinating the various movements that have sprung up in the latter years to redeem earlier blunders. Since the beginning of 1902 five millions have been spent in New York mapping out the undeveloped areas. In 1903 the Improvement Commission was created, and five years later they reported various magnificent projects involving in all a cost of nearly \$80,000,000. A few of these, like the widening of Fifth Avenue and the extension of Seventh Avenue, have been completed.

In 1912 a separate study of Brooklyn was made by E. H. Bennett for a committee of citizens. Manhattan's dormitory is very much awake.

The transcontinental railways unified the United States. Only unified transportation can make New York a unit. Rapid transit may be said to be momentarily determined, but the latest solution does not touch other traffic difficulties, and their settlement involves city and state commissions and courts.

The functions of the dock department are so extensive that various civic bodies have more or less officially endeavored to assist. Over fifty reports have been issued regarding the problems of the west side of Manhattan alone. Parks and public buildings depend upon the Art Commission, the Heights of Buildings Commission, and taxing bodies of the various city departments. The City Plan Committee can do little more at present than create public sentiment.

A small city under commission government would do well to heed New York's warning: make one commissioner responsible and see to it that he is a Napoleon III.

Other cities beside Washington and New York tried to plan extensions during the nineteenth century, but the movement for scientific city planning needed a more powerful impulse. This came in the spectacular achievement of the Chicago World's Fair in 1893. At one of the meetings of architects and artists to discuss their plans and harmonize them by mutual concession, Augustus St. Gaudens is said to have remarked to D. H. Burnham, "Do you know that this is the greatest meeting of artists since the Renaissance?"

There began at Chicago a renascence that has expressed itself in every exposition since then, from Buffalo to San Diego and San Francisco. The making of these play cities showed the way to the real cities. Almost every municipal function was better performed because coördinated in a comprehensive scheme. Street paving and cleaning, water supply, sewage disposal, garbage and refuse removal, fire, police and health protection have been performed at the dictates of science, not of bosses. Chicago immediately inspired Cleveland's civic center. Other cities began to feel the spell of the Court of Honor. In the course of the next decade the time had grown ripe for city plans. Still the early impulses were æsthetic; municipal art commissions, not interfering with franchises and vested interests, made the opening wedge for city plan commissions.

Primitive man decorates himself before science arrives.

The chief beneficiary of the World's Columbian Exposition was naturally Chicago. It started at once to elevate its railway tracks and expand its park system. There was no plan worthy of the inspiration of the Fair until the Commercial Club put forth the Burnham and Bennett plans. These are the

most ambitious plans projected by a twentieth-century city. Their keynote is reverence for the lake. A semicircular harbor is to be built off Grant Park. This central park, that has been made out of nothing, is to be the gateway of the city. Westward is to stretch the city's main artery, into which will pour the subsidiary arteries. At the corner of Twelfth and Halsted streets is to be the civic center, projected on the scale of the Place de la Concorde, Paris. Halsted Street is in fact the longest street in the world, and the slum neighborhood chosen for the civic center is about the population center of the city.

Kansas City first showed America that a slum is the logical location for a boulevard.

Other great arteries needed for this gigantic scheme are already being developed. Michigan Avenue and Twelfth Street are being widened at an expense of \$9,750,000.¹ A three million dollar municipal pier diverts traffic from the congested river to the new harbor in the lake. The lake front can most happily be made the finest water entrance in the world because a line of sand bars, on which Chicago's refuse can be dumped, urgently invites an outer boulevard.

Nothing in this 200 million dollar scheme is utopian if done deliberately.

MUNICIPAL ART COMMISSIONS

Nearly a decade before the advent of the city plan commission, New York and Boston had established municipal art commissions (1898). New York's commission has been very active within its limited powers. These organizations have been imitated in other cities, and there are now several varieties of art commissions, including a Federal commission for Washington and two state commissions. The individualism that has made American cities hideous yields reluctantly to any communal control. When this involves an unknown quality, like the aesthetic, the advance steps are seldom venturesome. The art commission is at best tentative, its functions meeting with greater recognition when incorporated in the more utilitarian city plan commission.

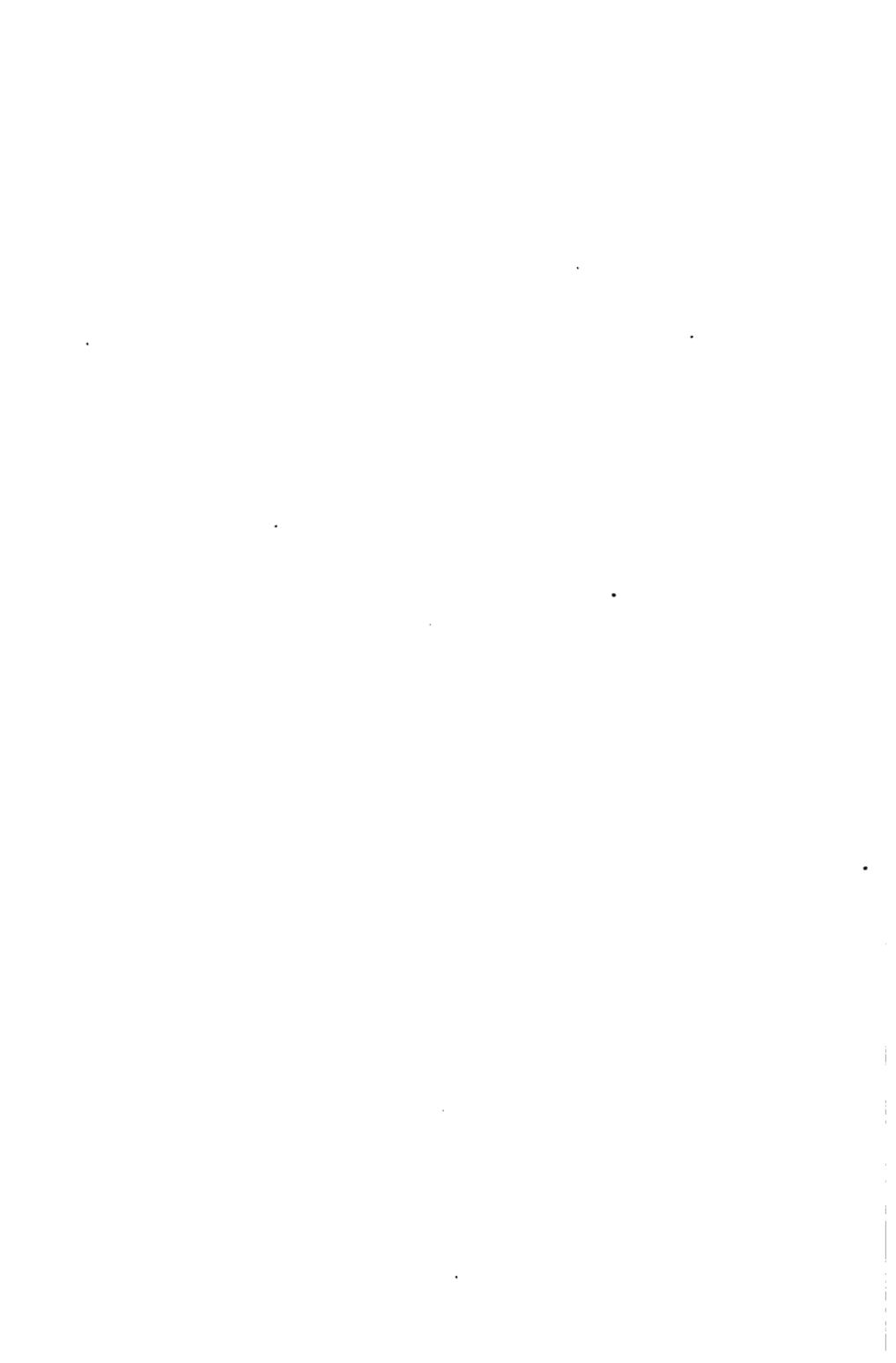
The most timid of the art commissions is that of Charleston, South Carolina, that is given advisory power to the city council.

¹ See p. 336.



Photograph by Kostmann, Wetmer and Faber Co.

CHICAGO'S BOUL MICH, THE BEST LIGHTED STREET IN AMERICA.



Baltimore, Denver, Milwaukee, New Haven and Saint Louis are given the veto on public decorations. Milwaukee is assured an appropriation of \$100 a year! Boston, Chicago and Minneapolis have added authority over private obstructions in the streets, when requested to use it by the city council. The Chicago commission is given an appropriation. Los Angeles, Mount Vernon (New York), New York, Philadelphia and Pittsburgh exercise the same authority over private street obstructions as over public monuments and improvements. They are also provided with funds. The powers of the Pittsburgh commission are larger than those of any of the others. The law of 1911 says:

"It is among the purposes of this act to secure, so far as may be reasonably practicable, the free light, air and prospect of the streets and open spaces of the city, and to prevent the obstruction of the same by unsightly structures, though lawfully erected, and for that purpose the art commission is authorized to devise, and recommend for adoption by ordinance of councils, such designs and regulations as may tend to prevent the unsightly occupation of such streets and open spaces, and, so far as may be practicable, to promote the beautification of such streets and open spaces.

"The commission may volunteer advice or suggestion to the owners of private property in relation to the beautification of the same; and any citizen or person, who may be about to erect any building or make any improvement may submit the plans and designs thereof to the art commission for advice and suggestion. And the art commission may receive and act upon the complaints and suggestions of citizens or voluntary associations having such objects and purposes in view as are aforesaid; and in acting upon the recommendations of the art commission the councils of the city may make full exercise of the police power, by ordinance."

Los Angeles and Yonkers make provision for women in the membership of their commissions.

CITY SURVEYS

Preliminary to a city plan some cities have had the wisdom or good fortune to secure a city survey. An investigation of all the social and industrial conditions of a city is invaluable to the city planner. Too often the city plan is looked upon as a piece of draughtsmanship leading to parks and other public improvements, without due respect for the problems growing out of unguided city growth. Sometimes a city has the wisdom to survey itself as Topeka has done.

Kansas is still profiting by that memorable query, "What is the matter with Kansas?"

Sometimes the impartial expert, assisting public-spirited citizens, arouses great antagonism by telling a city the truth about itself. Pittsburgh, Springfield (Illinois) and Lawrence (Massachusetts) have been turned inside out by Russell Sage Fund explorers, who have performed incalculable services, for which the people are not yet grateful. The Pittsburgh Survey establishes a new standard of local knowledge. Its six volumes have covered in detail the chief industries and the environment of workers in the Pittsburgh district.

Pittsburgh is in a better position to make a scientific city plan than any other city.

MUNICIPAL PLAN COMMISSIONS

A plan drawn by an expert and adopted by a city is the best paying investment it can possibly make. Most city plans have been made by voluntary enthusiasts, who had the help of the public opinion of the community, but were often unappreciated by the city authorities. These plans have dealt largely with aesthetic improvements that commended themselves to the nice people who furnished the money for the investigation. The municipal plan commission is the official recognition of the science of city planning. Hartford appointed such a commission in 1907. There were nearly a hundred such commissions in 1914, and many more cities were using voluntary agencies to make city plans. The propaganda of the Massachusetts Homestead Commission has made city plan commissions general in that state.

A report of E. P. Goodrich and G. B. Ford, suggesting a plan of procedure for the City Plan Commission of Jersey City, is an invaluable document for the guidance of all those who are conducting city surveys or making city plans.¹ The proposals of Messrs. Goodrich and Ford are scientific, economical and democratic. Their letter of September 19, 1912, suggesting the scope of their inquiries, was followed in detail in the report and is an invaluable analysis of the municipal functions within the scope of both a city survey and a city plan. It comprehends:

¹ Newark's Municipal Plan Commission established the precedent for Jersey City.

. . . "(1) Street traffic — vehicular and pedestrian; (2) transit lines and possibilities of re-scheduling and re-routing; (3) grading and surfacing of streets; (4) width of roadways and sidewalks; (5) widening of present streets and cutting through of new streets; (6) use of the water front; (7) factory development of certain districts; (8) food; (9) water supply; (10) sewage and garbage disposal; (11) housing in all its aspects; (12) treatment of congestion and unsanitary conditions; (13) methods of laying out new districts so as to give the best future housing development of the city; (14) resultant effects on real estate values and tax rates; (15) laws pertaining to housing; (16) recreation in connection with parks, playgrounds, streets, schools, social centers, especially with regard to the various classes and nationalities in the community; (17) development of parks and park systems, connecting boulevards; (18) planting on the various streets of the city; (19) grouping of public buildings; (20) embellishing bridges, quays, monuments, fountains, statuary; (21) placing of shelters and street signs, street lighting, trolley and telegraph poles, public comfort stations, etc.; (22) laws relating to city planning; (23) restriction, smoke abatement, billboard regulation; (24) method of paying for public improvements, including excess condemnation, unearned increment, assessing of abutters, municipal ownership, etc.; (25) conducting of surveys in line with these methods of securing the cooperation of local, public and private organizations; (26) how to follow up this work and how to get results;" . . .

Jersey City presents peculiarly difficult problems. It is under the shadow of the metropolis of the country. It is hemmed in by its eastern water front, almost altogether appropriated by private interests, and the marshes on the west that divide Jersey City from Newark. It is a subordinate and dependent city, like East St. Louis or Newport, Kentucky, without the independent political history of Kansas City, Kansas, or Oakland, California. The way it has gone to the root in organizing a strictly municipal city plan commission is one of the most hopeful signs of municipal advance.

Why be the doormat of the metropolis when it is possible to be the vestibule?

CITY PLANS PAYING FOR THEMSELVES

The Baltimore system of taking a percentage of the street railway receipts for parks is a method of relieving the taxpayer by securing revenue from the street railway patrons. The company makes it up in the patronage of the parks. The Denver method of charging up half of the cost of public music to the street railway company is another means of letting the

straphanger provide park entertainment for himself. Parks frequently pay for themselves out of increased taxes, even though the property owners benefit by the unearned increment. In Madison, Wisconsin, it has been estimated that the enhanced value of land adjoining parks has brought in an additional \$10,000. The land bordering Boston's Fenway was worth less than \$5000 an acre before the parkway was laid out. It is now said to be worth more than \$85,000. If Central Park, New York, that cost five or six millions, is now estimated at 200 millions, how much has it added to the contiguous property?

The chief endeavors to assess park costs on the beneficiaries are park assessments and excess condemnation. Kansas City, Missouri, assesses the whole cost of parks on land benefited. In 1908 the city was divided into six park districts. One park at least was to be provided in each district. Land outside the city was to be bought by general taxation or bond issues. The best park and boulevard system in the west has been paid for out of the unearned increment.

Every worthy citizen prefers to pay his way.

European cities have had a great advantage over American cities in their power to condemn more land than needed for public improvements and then sell at advanced prices, making the increased values pay for the improvement. That method has been constitutionally difficult in America. It has been almost impossible to alienate public property because of the fetish of protecting the right of private speculation. The Supreme Court of Pennsylvania has declared the excess condemnation law of 1907 unconstitutional. Ohio, Maryland and Virginia permit land to be taken to protect existing possessions. Massachusetts, New York and Wisconsin have amended their constitutions to permit the taking of excess land with the purpose of selling building lots adjoining parks and public places. Wisconsin allows the land to be sold with restrictions guaranteeing the protection of the improvement. The Connecticut law of 1907 sets no limit to the land that may be acquired. Conservative Connecticut at last puts us abreast of Europe in attaching more importance to the citizen than to the speculator.

The best fruit of America's large crop of city plans is the discovery of the necessity of excess condemnation and the appropriation of the social increment of land values.

CHAPTER XVIII

MUNICIPAL OWNERSHIP¹

THE municipality is an organization of consumers. It includes all the people in its political area, whether they vote or not, for all of them pay taxes, directly or indirectly, for the satisfaction of their communal wants. The consumer pays all the bills (including taxes) of landlords, storekeepers, manufacturers and laborers, and in his capacity as citizen votes for the organization which supplies his public needs. It is not possible to understand municipal government, or do justice to it, until we recognize that it is not a political incident in the busy life of an industrial community; it is not an institution for the perpetuation of graft, nor, of necessity, an aggregation of sinecures; neither is it an eleemosynary foundation for the gift of franchises. It is the indispensable method of organizing the common life of the geographical region defined by the municipality.

The city is "the hope of democracy" not because it is an organization of parties or workers; it is an organization of neighbors.

COMMUNAL WANTS

The questions which naturally arise after a survey of American municipal activities are: Do these activities satisfy communal wants, and are the means subordinate to the ends? When one saw in the nineteenth century the financial and physical dominance in municipal affairs of the transportation systems, or witnessed the encroachment on the life of the citizens of ill-paved and unclean streets, or observed streets frequently torn up to make place for wires and pipes of various kinds, or was oppressed by too frequent vistas of a miscellaneous collection of telegraph, telephone, electric light, gas and trolley poles and standards, to say nothing of the ubiquitous signboard, one was

¹ The acute reader will have noticed that the whole volume deals with nothing but municipal ownership.

inclined to wonder when the preparations were to be completed and life was to begin. The discontent of the citizen increased when he saw public officials serving the corporations at the expense of their constituents, health commissioners more solicitous for the landlord than for the tenant, smoke inspectors derelict in duty while influential manufacturers and railway officials ignore the well-being of the community, public library trustees accepting benefactions designed for the public and then restricting the use to a favored few, school board members resenting advice given to them by the public which paid for the schools, or park commissioners instructed to provide playgrounds for the children but possessed by an infatuation for grass. It is most encouraging to find, in spite of the continued assertiveness of some of the public service corporations and the failure of some of the municipal departments to satisfy the needs of the community, that there has been a most notable development in the extension of municipal functions and their efficient performance.

"The best government is that which governs least" but serves most.

The more compact the population, the more economical and necessary are collective activities. Misgovernment under these circumstances is due to the imperfect education of the people and the large rewards of exploitation. In the United States maladministration has been popularly associated with the larger cities. In fact, however, it only becomes conspicuous there because the amount of expenditure is so great. The power of government increases in direct ratio with density of population. As a city grows economy of large purchases and processes leads to the increasing municipalization of activities. A city's credit, even under misgovernment, is greater than that of any private corporation. With good public administration neither private monopoly nor private competition can achieve the economy of municipal management.

Municipal ownership succeeds wherever it is not opposed by business men and the press.

THE HYPNOTIZED BUSINESS MAN

Increasing wants are the cause and measure of civilization. As the wants of the people multiply and diversify, industry and

civilization progress. These wants are both individual and social, and the collective wants are best satisfied through public organization. Most of the communal wants are unremunerative and consequently have graciously been turned over to the municipality by those who conduct the profitable enterprises. In American cities the latter generally include transportation and communication, lighting, power and heating, and sometimes water and markets. The struggle to possess these privileges has been akin to the strategy of war. The spirit generated has, like the war spirit, distorted values, destroyed all sense of proportion. The unremunerative enterprises have not been immune. They too have been sacrificed as non-combatants are in the fury of war. Big business men in Chicago are trying to undermine the educational system by organizing vocational education separate from the city school system, making it amenable to capitalistic bias. Business men through their corrupt political boss emasculated the social center system of Rochester. The business interests of Cleveland, Cincinnati, Denver, San Francisco and a host of other cities have lined up with lawless corporations against the community. They have identified themselves with highwaymen like C. T. Yerkes and Pat Calhoun who have robbed even these business dupes. They have made it difficult for public servants to perform the most neutral services just as scholars and savants have surrendered their principles at the behest of the military reactionaries.

The same business men who scorned Tom Johnson succumbed to Cassie Chadwick !

Few American cities are without their experience with blind opposition from business men, dead or moribund. The municipalization of street railways was held up in Chicago and delayed in Cleveland and Detroit by men who had no financial interest to serve and who knew no more about municipal ownership than they know about the causes of the European war. Grave obstacles were interposed by men long dead whose antiquated ideas had been carefully embalmed in constitutions and franchises. The unqualified success of Boston's municipal subway has been repeatedly threatened by the railway lobbyists supported by Boston's highest Brahman set. If it had not been for patriotic Jews guiding the Franchise League, the Puritan would have sapped Boston worse than he has. The Hamilton,

Ohio, municipal gas works had years of the most sinister antagonism. The Pasadena electric plant was threatened until California passed a law forbidding a private corporation's lowering rates in one city while maintaining them where there was no competition.

Sometimes those who rock the boat go down with their victims.

The "awful example" of the public utility propagandists is the Philadelphia gas works. It has been claimed that the lease of the Philadelphia gas works to a private company indicates the failure of municipal ownership. The Philadelphia experience is, in fact, the most powerful argument for the restriction of the power of corporations ever presented in America.

Philadelphia has owned portions of the gas supply since 1841, as a consequence of the inefficiency of the private corporations then supplying gas. The price of gas at that time was \$3.50 a thousand cubic feet. The control of the gas supply was put into the hands of a board of trustees, known as the Philadelphia Gas Trust. The management was never satisfactory, and there were many evidences of extravagant expenditure. Frequent efforts were made to place the control in the hands of the City Council. As a consequence of these efforts offers were made by private parties to lease the plant, for twenty-five years, at a rental of one million dollars per year. Other offers were made for purchase. Public opinion, however, prevented either of these actions. Direct control of the gas works by the people was not secured until 1887. In spite of corruption and extravagance the price of gas had been repeatedly reduced until it was sold for \$1 a thousand cubic feet, when the city parted with the works.

In the year 1896 the reconstruction of the gas works was contemplated, and the mayor, the Director of Public Works, and the two branches of the City Council seized the opportunity to express their approval of municipal ownership, and condemnation of private monopoly. The following year the Councils passed an ordinance, leasing the gas works to the United Gas Improvement Company for less than the sum offered by any other bidder, and the mayor signed the ordinance. The most favorable offer would have secured to the city during the life of the franchise ten million dollars more than was secured by the offer accepted.

No one can question the superior management of the United Gas Improvement Company, but the effect of the lease was to confirm the method by which it was secured. The people barely frustrated a similar attempt to let the water works depreciate so that public opinion would sanction their lease to local capitalists. The leading retail merchants of Philadelphia and the press combined to give the street railway company the few remaining privileges within the gift of the city in utter defiance of a more liberal offer from an unimpeachable source.

The lease of the Philadelphia gas works is the crowning episode in the transformation of the City of Brotherly Love into the City of Brotherly Loot.

The building of the Los Angeles aqueduct is a triumph of public ownership over private industry. There was the usual fight to wrest the privilege from the city, not for the sake of the water works but for the latent value involved in the power to be generated over a wide area, making land and industrial speculation profitable. Before the city had developed its own cement plant private industry tried to charge it 50 per cent too much for cement, and only the threat of suspension of the enterprise brought the conspiring cement men to terms. In building the Jawbone siphon ($7\frac{1}{2}$ by 10 feet, 8136 feet long) direct labor cost Los Angeles \$700,000 less than the lowest bid, and it was built in half the time guaranteed by private enterprise.

Small towns all over the country, especially in the South, which superstition holds to be backward, own and operate economically combined water and light plants. Where big business has not a firm grip municipal ownership is comparatively simple.

OMAHA VERSUS BUSINESS

The city of Omaha struggled for sixteen years against a private company, court decisions, legislative limitations, and sinister influences in the city to secure municipal ownership of the water supply. In 1896, with its franchise having still twelve years to run, the Omaha company secured an extension from the City Council. The city engineer, R. B. Howell, reported against the franchise, which was vetoed by the mayor. The attitude of the Council may be indicated by the fact that it was enjoined from passing the franchise over the mayor's veto. The follow-

ing year an appeal was made to the legislature to amend the city charter so that no franchise could be granted without a vote of the people. Nevertheless, the new City Council granted the franchise and it was approved by the new mayor. It was subsequently declared void by the Supreme Court. In 1900 the people voted almost unanimously the bonds necessary to purchase the plant, but the council refused to act. The people again had to appeal to the legislature to command the purchase of the water plant, creating for this purpose the Omaha Water Board. The council then acted and appraisers were appointed.

The municipal ownership movement resulted in sending legislators to Lincoln in 1904. The following year the legislature increased the powers of the Water Board, removing from the City Council all authority over the water supply. The appraisers valued the plant at something over six millions, which was finally sustained by the Supreme Court of the United States. The city voted in 1909 to issue bonds for six and a half millions to buy the plant. The interest rate prevented the sale of the bonds and new bonds were voted on in July, 1911. Fraudulent election practices defeated the vote for the bond issue, but within thirty days the proposition was resubmitted and the interest was so intense that the vote carried twelve to one. In 1913 a large part of the income was threatened by the packing district. The legislature again had to be appealed to and held the waterworks intact by creating a Metropolitan Water District.

Why does big business resent public efficiency?

Omaha now enjoys from the muddy Missouri River clear and pure water. On purchase it reduced the rates one-third, and made another 5 per cent reduction in 1914. After spending over seven and a half million dollars for the waterworks and extensions and setting aside for depreciation and sinking funds \$650,000, over \$100,000 was left as a net surplus. The service has increased 12 per cent, while the cost of operation under public ownership is 8 per cent less than for the last year under private ownership. Fighting against obstacles unknown to private capital, the least slip in the process would have furnished the public utility publicity bureaus with another indictment against municipal ownership.¹

¹ See pp. 360-363.

When soldiers are asphyxiated in the trenches they are not called deserters.

MICHIGAN'S EFFETE CONSTITUTION

The obstructive business men are often dead. The cities of Michigan have had exceptional difficulty in managing their own affairs because of the constitutional provision that has handicapped Detroit in its endeavor to secure municipal ownership of the street railways. The constitution of 1850 forbade the state to be "party to or interested in any work of internal improvement." This was invoked against public welfare repeatedly on the ground that municipalities were the creatures of the state and therefore could not undertake internal improvements. This constitutional provision of a past age blocked the first attempts at electric lighting in the capital city. The electric lighting plant of Lansing has been run with success since the repeal of this provision, but a band of merry Robin Hoods secured from the legislature the right to invade the city with a competitive plant against the will of its authorities.

Michigan's new constitution is such an advance on the old that the courts have sanctioned municipal trading in South Haven, which sells electrical appliances.

The municipal gas plant of Ypsilanti was inaugurated in November, 1914. Three years before that time the gas company asked for a renewal of its franchise for thirty years because it would expire in two more. Municipal ownership sentiment was widespread in Ypsilanti because it had early operated its water and street lighting plants.¹ There was no criticism of the gas company, but the people wanted to extend municipal ownership. They immediately found the banking and legal interests of the city against them. "The very best people" were as usual lined up against the community. The people elected a council and mayor pledged to municipal ownership. A committee was appointed to request a price on the gas plant. The company refused to name a price and pointed out that the city had no authority to acquire or operate an existing plant. As this was true the committee set out to amend the charter. This was found impossible because state legislation forbade a city to

¹ See pp. 68-71.

amend its charter until it had framed a charter under the authority of the new state constitution adopted shortly before. An amendment to the constitution was passed permitting cities to revise their old charters. It was indorsed by a plebiscite in 1912. The legislature then specified the manner of making its amendments; Ypsilanti promptly amended its charter so that it could either buy an existing gas plant or build a new one.

The gas company now named the figure of \$227,000 as their price. The committee brought this down to \$165,000. The City Council voted to submit to the people the proposition of erecting their own plant at \$160,000. Before this vote was submitted the gas company reduced its demand to \$125,000. The authorities accepted this, but found they could not submit it to the people until the Supreme Court had passed on the charter amendment. Before the court decision was reached, the proposed contract of the gas company expired by limitation and the company presented new claims for repairs. Then the council decided to submit the proposition of building a municipal plant to be voted on at the spring election. The gas company and the allied financial interests of the city prevented by sixty votes the three-fifths majority necessary to carry this proposal. Then the gas company offered to sell the property for \$110,000 and the offer was ratified by the voters.

Another legal technicality was sprung. It was claimed that while bonds could be issued against the general credit of the city up to 10 per cent of its assessed value, only one-fifth of this could be used for public utilities, and the city had already issued this amount for water and electric light. It was necessary, therefore, to mortgage the plant to its full value to protect the bonds. The bonds were thereupon boycotted by the banks, the gas company and the bonding houses. As a climax, the European war broke out just as the bonds were being put on the market. A committee of patriots — business and professional men — was organized to sell the bonds, which they did in three weeks. Subscriptions ranged from \$100 to \$10,000. The committee served without compensation, and the entire issue of \$130,000 6 per cent bonds was sold without any expense for commissions.

Under such conditions the wonder is not that municipal ownership has been so widely successful, but that it ever succeeds.

ELASTICITY

In addition to the difficulty of good government, when the leading citizens are interested in private enterprise and indifferent to collective activities, there is also the handicap of the limited area of public operation. Private street railway and electric lighting franchises may cover a much larger area than a city; there is more elasticity in the conduct of private business. The city officials are so hampered by the crude restrictions of our imperfect American democracy, that even if they are the peers of the managers of private corporations, there are the heavy limitations of an inelastic charter.

When Gulliver was bound by the Lilliputians, he was hardly responsible for his "inefficiency."

As cities get powers comparable to those of private corporations municipal ownership becomes easy. The railway magnates all over the country are in arms against regulations imposed by state and nation. These regulations are often onerous and unwarranted, but never so restrictive as those under which cities have been accused of failing in municipal ownership. New York, Pennsylvania and Missouri have gone beyond Massachusetts and given their largest cities the right to build, own and operate subways and street railways. Even before this power is applied the cities are fortified against oppression as a woman is when she gets the ballot.

First-class cities in Minnesota have been authorized to construct union railway stations. North Dakota has given city councils the power to submit to referendum the question of bonding the cities for auditoriums, armories, playgrounds, gymnasiums, baths and recreation. Houston is the first Texas city to use the new constitutional home rule privilege. It has amended its charter so as to permit all kinds of municipal trading. Iowa municipal light, water, heat and power plants may now sell their services beyond the city limits. California has once more emphasized its home rule faith by authorizing public utility districts. Such areas may include urban and rural regions, may cross county lines, but may not split a municipal corporation. These districts are empowered to build and use works to supply light, water, heat, power, transportation, telephone communication, and to dispose of garbage, sewage and refuse.

Cities only need the freedom of private corporations to distance their efficiency as the government has in Panama.¹

THE SINEWS OF WAR

The discussion of municipal ownership involves both profitable and unprofitable services; first, because the increasing expense of the unremunerative functions demands a revenue which the ordinary methods of taxation do not meet; second, because the standard of life which is furthered by the unprofitable public services is higher than that made possible by the present methods of public utility corporations. When it is seen how valuable are franchises and how much better the existing public services meet the needs of the people than do the best private corporations, even the American business man will abandon his eighteenth-century philosophy and become an ardent advocate of municipal ownership. At present only a few men of affairs profit by the exploiting methods of semi-public corporations. Even business organizations such as Boards of Trade and Chambers of Commerce are awakening to the absurdity of giving a few men special privileges, not only at the expense of the masses but to the inconvenience of business. The profits of public utility corporations amount to a tax on business as well as on the consumer.

While franchises exist there will be business unrest.

The advancing necessities of the people make a demand for more services and new revenues. The resources of our antiquated taxing systems are not yet exhausted. The incidence of taxation is at present unfair. Still the wants of the people multiply so rapidly that even with scientific taxation other reservoirs of wealth must be tapped.

American cities get their money chiefly from local taxes, paid, as has been said, by the consumer, through the manufacturer, storekeeper and landlord. Other sources of revenue are special assessments (charging up the benefits to the property owners who profit by them) and trade, a source of municipal revenue much less familiar here than abroad. The revenue derived from liquor licenses, our chief trade tax, is decreasing in most cities.

¹ See p. 83.

Some cities have receipts from franchises either by taxing them, as in New York and other states, or by compensation based upon earnings, or by the sale of franchises. Baltimore supports its parks from its percentage of street railway earnings. Chicago is supposed to be accumulating a fund for municipal ownership out of its share of the people's nickels. Still the demand for municipal funds grows. Our urban elementary public schools of over five hundred cities cost us one hundred and ten million dollars. It is not without significance that street railway companies in the same cities enjoyed net earnings to the amount of one hundred and thirty-eight million dollars. The receipts of the street railways would have paid for the public schools. All the debt incurred for both remunerative and unremunerative functions in most of our cities acts as an obstacle to the extension of profitable municipal enterprises, because of state restriction of the city's debt. A million-dollar life-saving playground is a debt, not an asset in America. A profitable water supply is also a debt, not an asset in most states by the peculiar laws designed to hamper municipal activity in the interest of private corporations. New York has lately been freed from this burden.¹

Starving non-combatants is practiced only by the enemy.

MUNICIPAL TRADING

The British term "municipal trading" distinguishes very clearly between the remunerative and unremunerative enterprises of the city. The limited extension of such functions in this country has prevented a clear classification until recently. The American superstition has recognized the propriety of municipal ownership of the water supply, but has been timid about other enterprises, commonly limiting them by constitutional and charter provisions. The report made by the government in the Bulletin of the Department of Commerce on

¹ New York Debt Limit Amendment: "Any debt hereafter incurred by the city of New York for a public improvement owned or to be owned by the city, which yields to the city current net revenue, after making any necessary allowance for repairs and maintenance for which the city is liable, in excess of the interest on said debt and of the annual installments necessary for amortization, may be excluded in ascertaining the power of said city to become otherwise indebted, provided that a sinking fund for its amortization shall have been established and maintained."

the "Financial Statistics of Cities" indicates that American cities have \$1,237,000,000 invested in municipal trading enterprises (of which \$909,000,000 were water supply systems). New York City's investment is more than one-third of the total for all American cities. A measure of the present extent of these municipal activities may be seen by noting that American cities have \$914,000,000 invested in recreation, mostly parks, and \$604,000,000 in schools, the total value of city properties being about three and a half billions. It is safe to say that one-third of this earns a profit.

Common property is becoming common.

Cities own more electric lighting plants than gas plants because the advent of the former coincides with the movement for municipal ownership. In the same way the increasing amount of paving done by contract labor has led to the establishment of asphalt repairing and paving plants. Fourteen cities have nearly half a million dollars invested in that way, of which Detroit was the first. It was estimated to have saved \$69,000 during the first five years of its existence. New Orleans not only has a municipal repair plant, but lays asphalt, brick, and other pavements. The borough of Manhattan is building the largest municipally owned asphalt plant in the world. Pasadena owns a road-oil pit, by means of which it is able to furnish a uniform oil for the treatment of the street paving. It has been an invaluable contribution to the streets and roads in that section of the country where oiled roads are general and where uniform treatment is imperative.

Pasadena in the last six months of 1913 took in \$8000 for oil, making a profit of \$2400, which is more than the pit originally cost.

Los Angeles also conducts a municipal garage. The garage houses all the motor vehicles owned by the city of Los Angeles except those of the Water Department and Fire Department. It is responsible for repairing all of the power vehicles from the policeman's motorcycle up to the Fire Department's largest piece of apparatus. Each department is charged up for the services performed at cost plus 20 per cent for administration charges. The charges average about sixty cents an hour as compared with seventy-five cents to one dollar formerly paid for private enterprise. The garage maintains some machines

which are rented to other departments, again charging each department for actual service. There is also in the garage a store department where automobile accessories are kept. The city saves from one-third to one-half the price on this material.

A rose by any other name would smell as socialistic.

Kansas City, Missouri, conducts an electrical supply store furnishing lamps, stoves and household appliances. Twin Harbors, Michigan, started a municipal coal yard in order to provide its citizens with retail quantities of coal at wholesale prices. Weatherford, Oklahoma, has a municipal ice plant and Cleveland a cold storage plant. Weatherford makes ice in connection with the water and light plant, utilizing exhaust steam. While Detroit, Seattle and San Francisco were struggling to municipalize parts of their street railway systems, Monroe, Louisiana, built the first municipal railway in America.¹ The nine miles of track equipment, costing \$100,000, have been paid for out of ten years' earnings. It is run in connection with the water and light plant.

He laughs best whose laughing is infectious.

Sabetha, Kansas (population 1800), is one of a number of cities that have gone into city heating. Its lighting plant also furnishes steam heat. Newton, Massachusetts; Bloomington, Indiana; and Brookings, South Dakota, show that there is no geographical limitation to municipal heating systems. Cleveland has established the office of City Heating and Ventilating Engineer with duties of inspection. It has also put up a steam heating system at a cost of \$150,000 to utilize the exhaust steam from its plant in Fairmount Road. It had experimented with the low pressure steam system operated easily in connection with this plant, and was thus led to install a high pressure heating system in order to distribute steam greater distances.

Brookings, South Dakota, purchased its local telephone system in 1903 at an appraised value of \$18,000. Half of the bonds were paid in 1909, the other half in 1913, from the revenues of the plant. It thus paid for itself in ten years. January 1, 1915, it had \$8000 to its credit after paying for extensions. The charges are the same as those of the old private company — \$30 a year for office phones, \$18 for residence, and \$12 for party lines.

For many years the public utility organs made sport of Bos-

¹ See pp. 46, 47, 52-54.

ton's printing department. As recently as 1908 the department showed a deficit of \$2000. One of the later superintendents has turned over to the city a surplus of \$43,000 for three years of service. His successor turned in \$64,000 as the net profit of two years of operation.

Among the other municipal trading enterprises New York and Portsmouth, Virginia, own ferries; New Orleans sugar sheds; Grand Forks, North Dakota, an abattoir; Denver irrigation works; Charleston, South Carolina, a powder magazine; New Orleans and San Francisco belt railways; Augusta, Georgia, a canal; Northampton, Massachusetts, and Red Wing, Minnesota, theaters.

These experiments in municipal trading indicate that the only reason our American cities are behind European cities is that the dead hand of the Constitution continues to rest heavily upon them.

PRIVATE INITIATIVE

The tendency toward municipal ownership raises some questions with regard to the other than material advantages to the community of public ownership. In opposition to a time-honored contention, it may be urged that public ownership promotes private initiative. When a private company has developed organization to a point where it may be said to have reached stability, where improvements will be much fewer in the future than they have been in the past, where the possession of unusual privileges in a well-established economic function insures a steady income to the investors, it may be said that the time is ripe for public ownership. The needs of the community will be furthered by the enjoyment of the revenues received from such an industry, but better still, by the possibility of a reduction in the cost of the commodity or service. The community will also be benefited by setting free the capital and energy involved in this activity, and enabling these to find a new outlet in the supply of other human wants.

The great function of private capital and private initiative is in experimentation and development of undiscovered and unrecognized resources.

If the individuals owning the capital involved in such enterprises are to be assured a permanent means of livelihood private

initiative is so far curtailed. The public service will not be so well performed if the organization is strong enough to have a virtual or actual monopoly, and new fields of development will remain neglected because of the lack of necessity for seeking these opportunities for investment. It is sometimes paradoxically urged that the community unfairly displaces certain individuals by the public ownership of any activity. On the contrary, the proprietors have been adequately rewarded and have the means of seeking new opportunities, which may be of benefit not only to them, but to others. The community gains directly by cheapened service or a relief of taxation, and indirectly by the new activities promoted through the freeing of private capital. Expenditure in the purchase or provision of such an enterprise means taxation, which would otherwise never have taken place, and is a form of collective consumption which it is desirable to promote, and belongs in the same category as the increase of private consumption. So long as there is something desirable provided, and there is no excessive burden placed upon any one, it is to the community's advantage. On the other hand, many new industries fail to develop and many old ones languish because of the possession of special privileges by individuals who, at one time, were very energetic in promoting, directly or indirectly, the interests of the community.

The type of "big business" man who exploits the American city holds office in the European city.

It is an illuminating phenomenon that the contrast between the efficiency of British and German municipal administration and American inefficiency coincides with the widespread municipal ownership in those countries and its limitation in America. There is a constant effort in America to improve the machinery of municipal government without employing the dynamic which has made for successful administration in Europe. The effort in American cities has been to eliminate spoils and introduce business administration. This has led to admirable economies, but it is a poor makeshift for democratic administration. That can only be accomplished when the people possess the means of promoting community life, and service is substituted for profits.

The American, who has been indifferent to the private ownership of public utilities, is becoming alert to the impropriety of the private ownership of public officials.

UNREMUNERATIVE ACTIVITIES

Our dilatory and timid methods have had one compensation: they have developed our unremunerative activities first, so that there has been set a standard of service rather than of cost. Municipal services have not the sharp pecuniary measurement of private business, but they establish a standard of serving the consumer unknown to private industry. The municipality excels in the quality of service and its extension to people whose small demand or remote place of residence would cause them to be overlooked by business.

The taxpayer must have been educated to see that dividends can be paid in life as well as in money.

In some of our leading cities the efficiency of management and even the economy of administration of fire departments, schools, libraries and parks, is beyond anything known in private industry in the country. While the police departments are often under suspicion, the loyalty of policemen is more like that of soldiers than that of private employees. There is no question but that the firemen render a service to the consumers or citizens who employ them unrivaled by any corporation's servants. The trained public librarians of the United States furnish an example of technical skill and unremitting devotion to occupation which sets a new standard for both public and private activities. Similarly the services rendered by some of our park and educational systems is man for man, or woman for woman, and dollar for dollar, unapproachable in private industry.

Municipal ownership for purposes of revenue and service is on the eve of its greatest expansion in the United States. As the spoils system is giving way to business administration, so will the latter be succeeded by democratic service.

MUNICIPAL IMMORTALITY

There are more "widows and orphans" in every community than in any public service corporation. It is more important to protect the whole of the coming generation than that fraction for which corporation magnates are so solicitous.

The burden on the future citizen of postponing public control is one of the chief reasons why there should be a greater exercise

The Toledo Museum of Art.





of municipal authority, even when the character of the officials is such as to dismay sober citizens. The charter of the original street railway company of Philadelphia gave the opportunity for municipal ownership at any time. Every franchise extension has made it increasingly difficult for that city to take possession of the street railways. The same is true of many other cities which have been helpless because of franchise conditions, and some of these have renewed franchises for periods of from twenty to fifty years without regard to the possible desirability of closer municipal control. One of the cardinal principles recognized by nearly all classes of citizens is that however little a city may now be prepared for municipal ownership, a clause making that possible must be inserted in the new franchises for the protection of subsequent generations. Yet this protection may be unavailing, if, when the day of reckoning comes, the city can be made to assume all the financial burdens of watered stock.

Municipal ownership must be as immediate as existing franchises will economically permit.

Public ownership provides for the coming generation and thus fulfills the community's law of life. The superior experience and more immediate interests of private capital make for energy and sometimes for efficiency, but there is no permanence. One of the most serious difficulties involved in the private performance of services which are essential to public welfare is the fact that the individuals in control, however honest they may be, have no inducement to make provision for the needs of the coming generation. Thus the community is frequently saddled with burdens which remain a tax upon the resources of a generation in no way responsible for these actions. Franchises which extend beyond one generation are utterly indefensible. There is an abundance of experience to prove that the life of one generation is long enough to provide adequate remuneration for such investments, and the numerous injustices worked by any greater extension of such franchises furnish sufficient evidence in favor of short franchises and subsequent public ownership.

The municipality possesses immortality as no individuals or corporations can, and its interests, even more than those of a family, must be anticipated, so that the coming generation may not be sacrificed to the present.

CHAPTER XIX

MUNICIPAL ADMINISTRATION

THE FEDERAL SYSTEM

THE scientific administration of the American city is an achievement for the twentieth century. The fathers of the republic made no provision for the government of cities. At the time of the adoption of the United States Constitution there was no city so large as one hundred cities now are. The consequence was that cities were free to experiment with forms of government, which they did with abandon throughout the nineteenth century. The insignificance of the functions to be performed, the absence of other precedent, and the growing reverence for the Federal Constitution misled most of the cities into imitation of its principles. A document founded on foreign theories of government and absolutely aristocratic in its purpose was used as a model for the democratic administration of cities. Failure was inevitable, but American citizens enjoyed a century of experience with the growing power of the boss before discovering the fallacy of the system of checks.

As Emerson said of creeds, constitutions show how far the waters once came.

The arbitrary separation of executive from legislative functions has been virtually universal from the time when cities abandoned human experience and put their trust in the divinity of Alexander Hamilton. The colonial towns were governed by a council without a mayor. The beginning of the federal delusion came with the addition of the mayor's veto. If, then, the house did not seem sufficiently divided against itself to show fidelity to national waste and confusion, a second council was added. From time to time as public business grew other administrative officers and boards were superimposed. The more reliance was placed

on checks and not on the intelligence and integrity of the voter the tighter grew the grip of the boss.

A plural council is as valuable a guarantee of salvation in Philadelphia as a plural marriage in Utah.

THE CRUDE BICAMERAL SYSTEM

The crude federal system as it works in Philadelphia or any other city, in any state in the union, or in the nation's capital illustrates the inconclusiveness of nineteenth-century experience. If the people want a measure passed in Philadelphia they must employ the following methods among others. A caucus must be held to determine candidates. Experienced men naturally control these meetings; the patriotic but untutored citizen finds himself baffled by the intricacy of political combinations. Election follows nomination. Philadelphia is still in the clutches of a corrupt national party that keeps the honest but unintelligent citizen submerged in protective tariff slush. Hence the elections never offer a clear-cut local issue. Under these circumstances the people's candidates are chosen only when the bosses disagree. In the midst of the "Billy Sunday" revival, when Philadelphia was in a state of moral exaltation and the daily papers were giving as much space to sermons as they usually do to prize fights, it was universally admitted that the only chance of returning the reform administration was the improbable falling out of the bosses, whose disagreements had permitted the election of Mayor Blankenburg.

In the unlikely event of the election of an honest mayor and a majority of councilmen, hitherto law-abiding, a measure has to pass both councils (after running the gantlet of lobbies and committees) and risk the mayor's veto. It is improbable that a popular bill will pass on its first presentation. The people must therefore be prepared to bring pressure on unenlightened or corrupt councils, or even renew their efforts with newly elected councils or mayor. Should the bill pass (probably in a mutilated state) the executive department must see to its enforcement and perhaps the courts determine its constitutionality. If the measure is of great value to the people, it is most likely to be opposed in the courts.

Between the people and their laws stand caucus, nomination,

election, common and select councils with their committees and lobbies, mayor, city charter, state constitution, courts!

Most of the federal charters are not so crudely imitative as that of Philadelphia. In many instances they provide for only one council. They are generally complicated, however, like the state constitutions, by boards and commissions designed to do the work neglected by the original legislative and administrative authorities. But they all err in keeping the legislative and executive departments antagonistic.

THE ORGANIC FEDERAL SYSTEM

The latest federal charter is the most consistent. The new Cleveland charter is frankly framed on the "federal" principle without slavishly following the United States Constitution. It is the product of the invaluable experience of Cleveland under Tom Johnson and Newton Baker. For the first time in an American city the system is being given a trial under a charter organically designed for a municipality. The charter was framed under the Ohio home rule law so that it has no strings to it. There are no party primaries and no party designations on the ballot. Candidates are nominated by petition and voters express their first, second and other choices at the election. They vote a short ballot because they choose only a mayor and a councilman from each ward, two candidates, after the British system. The mayor and heads of departments have seats in the council but no votes. The charter includes the initiative, referendum and recall. The mayor is the supreme executive, appointing all heads of departments, viz.: law, public service, public welfare, public safety, finance and public utilities. These constitute his cabinet. The division between executive and legislative is clear, vastly superior to the United States Constitution, but it puts reliance on the later fallacy of one-man power. A superman in the mayor's chair is supposed to swing twenty-six parochial celebrities in the council.

A city that has had two Napoleons is likely to believe in the divine right of kings.

THE BUSINESS SYSTEM

The first serious endeavor to modify the federal plan for cities was still faithful to national precedent. Business men began to demand one-man power over the prevailing conflict of interests. This was, however, in harmony with the extraordinary authority of the President of the United States. There was no intelligent reassignment of powers; the mayor was merely made supreme by the pernicious national practice of appointments. Chicagoans have given the mayor more power than any man can wisely use. Then they trust to luck to get a paragon. When they secure an able executive like Busse, or Thompson, who looks after the bookkeeping better than a politician is expected to do and is sufficiently deferential to the "efficiency" of public utility corporations, honest business men rejoice in the millennium.

Business is busyness!

The *ultima thule*, the *ne plus ultra* of the big business vision has been attained in New York with a charter fifty times as long as the United States Constitution, including all the amendments of 125 years. It would not be fair to saddle the business mind with all the defects of this unconscionable charter. It is an honest endeavor to devise a form of government for a cosmopolitan city, the prey of Tammany and its public utility masters and the victim of special legislation imposed upon the city by ignorant and not too scrupulous rural statesmen. Guileless business men have been misled by an imagined intimacy with the intricacies of politics, derived from spasmodic rebellions against Tammany. Instead of cleansing the system of infection they have tried to mutilate offending members. The mayor is invested with the power of the President. The head of the body politic is disproportionate. The council retains so few legislative functions that it has become a vermiform appendix, always threatening the life of the organism. The Board of Estimate and Apportionment is a new organism imposed upon the old. It is made up of the Mayor of New York, the president of the Board of Aldermen, the comptroller, and the president of each of the five boroughs. Its efficiency is due to the superior type of men the importance of the office has drawn to the position, and not at all to the unique nature of the body. New York has so much money to spend that it can secure a good deal of efficiency where another community would fail.

New York spends more money in its administration each year than London and Paris together. The metropolis is in many external ways the best administered of American cities, but its standards of expenditure are fabulous. It makes no pretense of determining what things should cost. The only demand made by its business monitors is that the bookkeeping should be accurate. As in Chicago and Pittsburgh reasonable charges for services would lower the dividends of public utility companies upon which its philanthropic citizens depend for the incomes from which they or their friends make their subscriptions to municipal reform.

A happy by-product of New York's standard of living is the Bureau of Municipal Research. A group of young university-trained men, skilled in economics and free from both political and business superstitions, have been able to get ample financial support for investigations into municipal mismanagement similar to the inquiries into business inefficiency now popular. Uniform accounting in the different municipal departments and a scientific budget have been forced on New York by this public-spirited organization. The very excellence of these financial methods intensifies the belief in one-man rule in the metropolis, and democratic administration is lost in the maze of ledgers and card catalogues. The city's unremunerative enterprises are fairly well managed, while the profitable services are exploited by the type of men who uphold a business administration.

The Socialist administration of Mayor Seidel in Milwaukee was the first to make a Bureau of Municipal Research official.

The Finance Commission of Boston was appointed in 1909 to bring order out of Boston's chaos. The state requires the city to appropriate \$25,000 in addition to the salary of the chairman. A bureau of municipal research has been organized by the commission. The universities of Wisconsin, Kansas and Nebraska serve the cities of those states through their extension divisions. They lack the power of the Boston Finance Commission but they are not regarded as so alien as many of the cities feel the private research bureaus to be.

THE AUTOCRATIC SYSTEM

Washington, D.C., is the model of municipal government to the statesman so far from his constituents that democracy is only a campaign slogan. The ostensible government of the District of Columbia is a commission of three residents, one of whom must be an army officer of fifteen years' standing. This officer has a corps of military men under him and disburses 30 per cent of the annual expenditures of the District. The civilian commissioners supervise less than 30 per cent of the expenditures. This commission of three, responsible for a little more than half of the budget, is dependent on appropriations initiated in the House of Representatives and has to act under the laws of ancient England, early Maryland, and a century of federal legislation. It is circumscribed by the United States' courts that control all criminal procedure in the District; its sphere is limited by the Board of Charities appointed by the President, the Board of Children's Guardians appointed by police judges, the Board of Education appointed by the Supreme Court of the District, the War Department that controls the Water and Park systems, the Interstate Commerce Commission in charge of the street railways and gas companies, the Department of the Interior caring for the insane; it is subject to legislation by the District Committees of the House and Senate.

The Washington commission is about as powerful as a Federal judge trying to fine the oil trust.

The House and Senate District Committees are directly and indirectly responsible for greater incompetency than anything in American public life except the aristocratic constitution of Alexander Hamilton. Congressmen and Senators are sent to Washington to represent their constituents and the nation; they naturally leave local affairs to these committees; Congressmen are legitimately occupied in larger affairs than the government of the District; they find it as difficult to understand the local government as other people do, unless they give it special attention. A Congressman has to trade his vote where he can. He wants improvements in *his* district, and can often get them at the expense of improvements in *the* District. If a Congressman gets in no deeper than to find money available at

4 per cent when he wishes to build a house, his mind works more sluggishly thereafter.

An insignificant minority of conspicuous patriots and of conscienceless grafters inform themselves about the methods of local administration in Washington.

The Senate and House theoretically devote a day a week to District affairs. Although this day is often surrendered to other seemingly more important matters, enough of the time of both national and legislative bodies is given to District affairs to discourage any genuine statesman. It is thus easy for members to rely on the Senate and House District Committees for reports on the innumerable details of District government. The Senate Committee numbers fourteen, the House Committee twenty. These Committees are so large and the members so preoccupied by national and personal interests that they in turn rely on their chairmen. The chairmen of these Committees become, therefore, dictators, in whose hands are not only enormous revenues, but immense influence over jobs and investments.

The importance of these Committee chairmanships is not fully understood unless one remembers the complexity of the government of the District, the small authority vested in the stalking horse commissioners and the methods of raising revenue. One-half of all the funds of the District are contributed by the national government. The extravagance of administration does not weigh heavily upon the people, who are excessively taxed considering the benefits derived but moderately taxed as compared with other cities. Citizens as well as grafting Congressmen are thus bribed to endure the present system. If some do feel the weight of taxation, they find themselves in opposition to the residents of the favored districts in which these appropriations are expended.

Any voteless citizen who might complain of injustice has to follow an interminable and disheartening path to secure redress.

An injured citizen would have to seek out the official representatives of the District — the Commissioners — in their office at Pennsylvania Avenue and Fourteenth Street. He would be told that they have no authority to make improvements and would be sent to the War Department, Seventeenth Street, south of Pennsylvania Avenue, the Department of the Interior, Seventh and F streets, the Interstate Commerce Commission,

1317 F Street, and the House District Committee at the Capitol. If the citizen had limited leisure, he could not see all these authorities in less than a year. When he finally had run the gantlet and had discovered that all administrative organizations are dependent on the House which makes appropriations, that the House relies on its District committee, that the members of the House Committee rely on the chairman, that the chairman holds the job because of his peculiar unfitness, that the chairman refers him to the House and that the one thing that the members of the House know is the peculiar unfitness of the chairman, the citizen would fall back among the other asphyxiated residents of Washington.

This is the form of government that the House minority leader says makes Washington the best governed city in America.

THE COUNCIL SYSTEM

The so-called commission form of government has a heavy load to carry in the fact that the government of Washington has been called by that name. The supernumerary commissions with which many other cities are burdened have made the load no lighter. The ground must be cleared of such débris by observing that this twentieth-century form of municipal administration is the *council* form of government. Instead of the federal plan of checks or the business device of a supreme executive the legislative body is above all other departments.

Many commission enthusiasts are not clear as to the reason for its superiority. It was at first supposed that the concentration of powers in one body was the essence of the commission form. This would be a sufficient justification for supplanting the effete system of checks, but it does not compass the superlative merit of the council system. There must be a head. In a democratic society to attain efficiency the people must rule but they must not be called upon to decide technical questions. The legislature cannot be made up of technical experts, but it must voice the popular will. On the other hand, the expert must not be called from his duties to campaign. It might be supposed that the spectacle of a campaigning president would remove the need for such argument, but tradition is a hard master.

The devastation of Galveston cleared the ground for the council form of government, but it did not complete the superstructure.

All commissions worthy of classification under the council plan enjoy this common denominator — the executive responsible to the council. Shallow writers have put Boston and Pittsburgh in this category because they have councils elected at large. Yet each city has a mayor with a veto, and Boston suffers from a checking body called the Finance Commission, by which Massachusetts interferes with local self-government. The fact that each city is better governed than it was under the unmitigated federal system gives it neither finality nor the commission plan. That the council plan itself is not final is shown by the constant and fruitful experimentation going on in charter making all over the country. Whether the commissioners shall be paid much or nothing; whether they shall give all of their time or part of it; whether they shall be elected to specified departments or appoint themselves; whether they ought to number three, five, seven or more, is still under debate. The offspring of the Galveston plan will soon find it hard to identify their mother. The conservative mother is already bewildered by the vagaries of her wild brood. Still the original Galveston plan held the germ of the improvements that have followed. The Galveston commission of five members, serving without pay, act as a council and review the work of each individual commissioner in his respective department. The collective council is supreme over its own members in their individual executive capacity.

Galveston's ill wind blew good to a whole nation.

THE ULTRA COMMISSION

It did not take long to improve upon the Galveston plan. While Texas cities were experimenting, progressive spirits in Iowa borrowed from California as well as from Texas, adding the referendum, the initiative and the recall, and the Des Moines plan became the standard instead of the makeshift Galveston plan. The more recent modifications are chiefly in two directions — the single paid executive and the all-inclusive commission. These two movements are not mutually exclusive. All

of the municipal functions may come within the survey of the council, and paid experts, or one manager with subordinates, may be responsible to the council.

St. Paul and Chattanooga are examples of cities that are trying to concentrate all municipal functions under one council. If it is desirable to have one commissioner in exclusive charge of the police and fire departments, why not have another supervise the schools and the library? If one community prefers the independent library or school board, another may choose to retain the park board. Sometimes it is not possible to incorporate a function because of inheritance or franchise. If there is no such obstacle, why not avoid the time-dishonored conflict and confusion? It is coming to be seen in most cities that the educational system must include the provision of books and perhaps recreation; St. Paul unites schools and library under one commissioner. The school system is increasingly the medium for supervising the health of children; Chattanooga has a Commissioner of Health and Education.

The spirit of the council plan is that of the twentieth century.

It is not so revolutionary to put all of the municipal departments under one council as it was to abandon the historic separation of executive and legislative. The issue is: do we want scientific government or grandfather government? St. Louis or Galveston might find temporarily a loss in efficiency in putting the library under the general government. Chicago might object to surrendering the special taxing powers that make the South Park Commission so capable. What the citizen is coming to see is that these local efficiencies reconcile him to general misgovernment. The imagination of the average citizen is quickened in proportion to the magnitude of governmental functions. Rarely does the able member of a park, school or library board contribute anything to the reorganization of municipal government.

Instead of immortalizing themselves by designing a nobler structure for democracy, most board members have their honored names chiseled on the corner stone of a public building.

When a city has burned its bridges the critic may ask: why is not the government ideal? In charter making most cities do not burn all of their bridges. St. Paul has done well, but relies still on some old ferries or pontoons. In a document of

108 pages — ten times as much as it needed — the St. Paul charter devotes 750 words to street sprinkling, a subject to be covered by statute, not by charter. It is given very limited powers of municipal ownership. It provides the same salary for the Commissioner of Education as for the Commissioner of Parks, Playgrounds and Public Buildings, but provides for a superintendent of schools at a still higher salary. The remuneration of the school superintendent is fixed in the charter but not that of the librarian or park superintendent.

Every charter is encumbered with some dead wood impeding the path to democratic administration.

THE ORGANIC COUNCIL

There are many compromises with the council plan owing to local political pressure or constitutional limitations or the longevity of the unthinking. Kansas City and St. Louis are compelled by the "home rule" charter granted to them by the Missouri legislature to have at least the semblance of two councils. It is doubtful, then, whether the Kansas City "commission" is a joke on the city or the state. St. Louis has taken a big stride forward in its new charter, but frankly surrendered to the inevitable. While some cities are compromising, logic is emerging. The latest word in the council plan might deceive the layman. The city manager is an office created under the old division of functions in Sumter, South Carolina, but it may prove to be the indispensable complement to the commission. By the use of it cities have come nearer to an organic council plan of government than through any other American experiment.

The city manager is no more to be confused with the business man's mayor than the laboratory method of General Gorgas is to be confused with the rough riding of Colonel Roosevelt.

The city manager is the paradox of an all-powerful executive absolutely subordinate to the council. He is preferably free from civil service restrictions, as in Cadillac, Michigan. In Dayton, unfortunately, the city manager has been made subject to recall by the voters and his staff subjected to civil service examinations. The whole purpose of the position is frustrated unless the manager is left as free in administration as the council



Photograph by Aspinwall Photo Company, Portland, Oregon.
MULTNOMAH COUNTY LIBRARY, PORTLAND, OREGON.



is in legislation. The people may properly veto or advise the legislature, but their will can only be executed by an officer free to use his technical skill, to be judged only by results. As the council must be responsible only to the voter, so the manager must be responsible only to the council. Whether a city has one executive or several the city manager idea represents the high water mark in municipal statesmanship — a public servant chosen from the world at large, free from local entanglements and personal prejudices.

The opposition of politicians to the commission plan is redoubled against the city manager. If election at large instead or by wards and the concentration of authority harass the boss, how much more disturbing is the giving of the fattest plum in the city government to a stranger? It is one of the most hopeful marks of municipal advance that almost all of the twenty-five cities operating under the city manager plan in January, 1915, had drawn their managers from a distance. It will take some time to persuade all of the cities to merge all of their functions under the council and to give the manager a perfectly free administrative hand, but with our present knowledge this is the goal of democratic government.

Democracy demands that the people and their representatives enjoy mutual trust.

POPULAR RULE

The system of checks was devised by men who distrusted the people. When a simpler and more direct plan is substituted it is illogical to deny the public every check on their servants, as is done in Galveston. The council must be elected at large to avoid petty politics and the picayunish men called to office by the old ward system. Yet a handful of the best men in the city can get completely out of touch with the people unless the public is educated, with its servants, by direct legislation. The referendum is not merely a check on representatives; it is a device for sounding and articulating public opinion. This is why it must be accompanied by the initiative. Otherwise the old weakness of American government — reliance on the issues paraded in the heat of a campaign — will exonerate councilmen who plead ignorance of the public's wishes. It has been a good instinct of the charter makers that they have almost universally

followed the lead of Des Moines instead of Galveston in adopting the initiative, the referendum and the recall. The recall has been little used and only occasionally abused. It will doubtless fall into disuse when it and the other methods of popular control change the character of public servants, as they are rapidly doing. Up to the end of 1914 two-thirds of 200 cities possessing all three of these popular instruments had used none of them.

“A watched pot never boils” over.

Electing councilmen at large does not secure majority representation. Neither does the primary system nor a second election. Over forty cities have therefore adopted the method of preferential voting. The voter expresses his first, second and other choices. This not only prevents the easy triumph of the corrupt element in a town over the probably divided better elements; it does away with blind hero worship; it enables the voter to indorse all the desirable candidates, and stops his pusillanimous and enervating contentment with the least undesirable candidate. This method, made popular by its original success in Grand Junction, Colorado, now employed in a city so large as Cleveland, would probably have given Chicago a mayor free from ring politics at the last election. The woman voter — that thorn in the flesh of corrupt politicians and the privileged classes — could have nominated a first-class man for mayor under the plan of the preferential vote.

The equal suffrage vote has met the expectations of neither its passionate friends nor its honest critics. It has, however, shown the greatest virtue demanded in the present state of municipal politics — non-partisanship. The women of California favored fermentation; the women of Oregon opposed the distiller. The women of Seattle switched on the recall of mayor, but they were not in subjection to the men. The women of Denver have been quite indispensable in keeping Judge Lindsey in office in the face of the foulest campaign of vilification and perjury that any public official in an American city has had to face. Repeated efforts have been made to trap the women voters as well as the little judge by those personal slanders to which the cave man and the society woman think the fair sex susceptible. Their constancy has been all the more creditable in Colorado, where the voices of many women have been hushed by economic

compulsion. The women have come off with flying colors in their first mayoralty election in Chicago. As large a proportion of women as of men voted, but their smaller numbers permitted the men to foist on them two ring candidates for mayor. They still showed their independence by choosing councilmen even more faithfully than the men from the Municipal Voters' League's non-partisan list. In two instances they defeated disreputable candidates that the men's votes would have elected.

The character of the polling places in Chicago has so changed that a gentleman can visit them without offense.

With the mature intelligence of both sexes using the preferential ballot only majority rule is secured. Government of the people, by the people, and for the people is still roughly approximated. Proportional representation offers a still more democratic representation. If there are 5000 voters and five offices to be filled, why should not each 1000 voters have a representative? It is quite common in American cities for thousands of people to be unrepresented under any of the familiar electoral methods. The proportional plan enables any substantial group of citizens to secure a voice in the government. If radicals and cranks could take advantage of it, so could stand-patters and reactionaries. Then there need be no talk of penalizing the non-voter, as Kansas City tried to do by a poll tax imposed on those who abstained from voting. This was fortunately declared unconstitutional.

The way to make patriotic citizens is to insure their representation.

HOME RULE

When the municipal machinery has been thoroughly democratized, it must still be protected from the sabotage of the state legislature. The municipality is the creature of the state. It advances by special legislation until the state grants it home rule. Often the state has wantonly interfered with the self-government of a city. This has generally been in the interest of a national party or special privilege. The Pennsylvania legislature has read municipal officials out of office in defiance of their constituents. The so-called ripper bills, removing the elected officials of Pennsylvania cities, are the climax of step-

motherly legislation. Among the gross impertinences on which the legislature of New York State squandered its time in 1912 were bills to create a board of sewer commissioners for the village of Albion; giving the Buffalo council the right to fix the salary of the superintendent of education; changing the title of sergeants of police in Buffalo to lieutenants of police; raising the salaries of the aldermen of Elmira from \$100 to \$200; providing for a fire marshal in Ithaca; authorizing the licensing of dogs in the village of Saratoga Springs!

Even Albany lacks home rule, but it has two Houses, and Barnes.

Another method of interfering with self-government in cities is the one employed to keep workingmen from being patriotic citizens — the injunction. Tom Johnson in Cleveland had over fifty injunctions served on him to prevent his doing what every honest man now indorses.¹

The latest and most subtle trick of special privilege to undermine popular government is the state commission for the regulation of public utility corporations in cities. The patent arguments for state regulation are: (1) the danger of unregulated monopoly; (2) the existence in most states of a commission

¹ Court injunctions during Johnson's first term as mayor of Cleveland:

- (1) July 22, 1901. — City board of equalization enjoined from increasing the valuation of the Cleveland Electric Railway Company.
- (2) November 9, 1901. — Enjoined from entering into contracts for cheaper street lighting.
- (3) November 9, 1901. — Enjoined from entering into a contract for cheaper vapor lighting.
- (4) April 6, 1902. — Enjoined by common pleas court from carrying out three-cent railroad franchise.
- (5) April 7, 1902. — Enjoined from permitting construction of three-cent fare railroad.
- (6) May 11, 1902. — Enjoined from carrying out three-cent franchise by circuit court.
- (7) June 30, 1902. — Injunction against three-cent franchise made perpetual.
- (8) July 19, 1902. — Enjoined from considering the granting of any franchises. Circuit court.
- (9) August 9, 1902. — Temporary injunction by supreme court against considering the granting of any franchises.
- (10) August 15, 1902. — Permanent injunction from considering the granting of any franchise.
- (11) November 19, 1902. — Injunction by the supreme court removing the police department from the control of the administration.
- (12) December 20, 1902. — Enjoined from making any investigation into inequalities in taxation.
- (13) March 6, 1903. — Enjoined from making contracts for paving of streets.

to regulate the corporations of the state; (3) the cities' frequent handicap of not being coextensive with their public utilities. These arguments are plausible, but in practice the cities, not the corporations, are restricted. The state commissions are too remote from the municipalities to have a sympathetic understanding of their needs. They are almost invariably more receptive to suggestion from private corporations than from public corporations. In Boston, where the state legislature sits a stone's throw from the city council and where the railway commission has its office, it is notorious that decisions have the visé of the corporations before they are handed down. The most flagrant instance of commission servility was the feeler sent out by an officer of the commission proposing a six-cent fare for the Boston Elevated Railway.

In the year 1915 to propose a six-cent fare in a metropolitan community in the face of the experience of Columbus, Cleveland, Detroit and other large cities is, conservatively stated, naïve!¹

The famous state commission of Wisconsin has not only handed down decision after decision favoring private over public corporations, it has repeatedly blocked the way to municipal ownership at the behest of private capital. In 1911 the railway commission of the state of Washington was expanded into the public service commission to cover the regulation of municipal utilities. An effort was made in that legislative session, repeated in each subsequent one, to include municipally owned utilities in the scope of the commission. In the light of court activity in Washington, always friendly to the private corporation in the regulation of rates, the only way to reduce rates to the level of those enjoyed by cities in other states has been by the competition of public plants. This has been so successful in the Washington cities that the same hand which controls courts has sought to rob the cities of self-government.

California has shown the way out of this tangle by the public utility district.² Under Home Rule each geographical area is self-governing.

¹ See Chapter III.

² See p. 367.

CRUDE HOME RULE IN CHICAGO

Philadelphia and San Francisco merge city and county governments in their endeavor to give home rule to a logical urban area. New York has incorporated its chief historic divisions into integral parts of the city, called boroughs. Chicago has adopted the mistaken syndicalist plan of creating separate municipalities for different functions. It now revels in twenty-two governments, and its citizens vote for 250 officials. Cook County, within which Chicago lies, is governed by commissioners elected by the men, the voters in the city electing their set and the voters outside of Chicago electing another group. The Sanitary District for the disposal of Chicago's sewage extends beyond the city limits. Sixteen of the other municipalities are park commissions. The other governing and taxing agencies are the city of Chicago, the Board of Education, the Library Board, and the Municipal Tuberculosis Sanitarium. The chief cause of this confusing multiplication of governments is the debt limit of Chicago, which is circumvented by authorizing new taxing bodies. The confusion is increased by the fact that the people do not vote for all of these officials, but they do vote for others.

Ex-president Eliot said he did not know enough to vote the relatively simple Cambridge ballot. What would a Radcliffe Ph.D. do in Chicago?

In addition to the mayor and councilmen Chicago men and women voters elect the city clerk, city treasurer, thirty-one municipal judges, and the bailiff and clerk of the Municipal Court! The court is an elected but not a taxing body. All of the sixteen park commissions are independent taxing bodies over which the city of Chicago has no authority. Any section of the city finding itself deficient in park space may organize a park district and elect a commission. There are also three appointed park commissions for the three geographic and historic sections of the city. These all represent in some measure an effort at local self-government. But there is also a Special Park Commission for the whole city, operating a bewildering system of playgrounds justified only by their necessity in the pioneer stage of public recreation. The municipal government of Chicago spends a little more than half of the taxes expended in the city for local government.

Most Chicagoans undoubtedly believe in home rule for Ireland.

METROPOLITAN BOSTON

Boston is no longer "a state of mind"; it is a fringe of piety surrounding the Irish. Puritan "Boston" is the suburban zone about the old city. Boston proper is a predominantly Irish-Roman Catholic city. The Puritan makes the mistake of trying to wrest the government of Boston from the majority. It is true that the invaders have not governed Boston efficiently; its tax rate is the highest per capita in the United States. But the Puritan is as muddle-headed as the Celt. Instead of working out a scientific home rule division of functions, both try to govern by main strength. The Irish home ruler saves his faith for the old sod; the Puritan devotee of states' rights falls back on the state. Nevertheless Boston is germinating the metropolitan government of the future. At present, city, suburbs and state are unsystematically intertwined. There are forty municipalities contiguous within fifteen miles of the State House. These suburban communities are jealous of their independence. Many of them are still governed by the historic town meeting. Together they doubtless constitute the best governed area in America.

Metropolitan Boston bears eloquent witness to the superiority of intelligent citizenship to mere form of government.

The interference of the state in local affairs in Massachusetts is not so petty as in New York or Pennsylvania, but it is constant. In no state are approved communal ventures so speedily universalized for the benefit of all its cities as in Massachusetts.¹ In the complexity of Boston's situation it has been natural to turn to the state. As the different metropolitan functions have developed at different times and have not always covered the same area it has been equally natural to provide that the commissions should be appointed by the governor. The familiar difficulties with police administration led to a metropolitan police system, now administered by a single commissioner. Metropolitan water and sewerage boards have been inevitable to meet the sanitary needs of so scattered a population. These functions are now united under one board, showing some progress in simplifying government. The Metropolitan Park

¹ See pp. 111, 116, 124, 140, 182, 228, 229, 260, 307, 356.

Board has developed the best park system in America, giving the 1,500,000 people in the district 17,000 acres of park space. A state commission supervises the street railways of these municipalities; another controls the gas and electric light companies; others the liquor licenses and civil servants. The Finance Commission of Boston is also appointed by the governor.

Out of this spectrum there begins to emerge a great, clear light. Why not keep the local governments for strictly local affairs and have a popularly elected commission embracing all of the metropolitan functions?

ORGANIC HOME RULE IN LOS ANGELES

What Boston is producing unconsciously Los Angeles is creating by design. Without the historic communities of the Boston district, without their valuable political experiences, and without their traditions and prejudices, Los Angeles is trying to design a logical metropolitan system. Ambitious, radical, aided by the California home rule laws and the California social atmosphere the City of the Angels may deprive the city of the Puritans of the honor of showing the world how to govern a metropolitan community. Los Angelans are accustomed to going after anything they want. If they want water, they pipe it 250 miles.¹ If they are tired of being an inland city, they annex the most available harbor.² In 1912 the citizens of Los Angeles adopted two charters, one for the city and one for the county, embracing about a score of communities. The county charter gives home rule to that unit of government, avoiding conflict with both the city and the state. The form of government is the commission; the county has five commissioners, the members being elected by districts; the seven city commissioners are elected at large. The city charter provides only for fundamentals, details being left to initiated ordinances.

Having perfect freedom in charter making and aided by such laws as that for public utility districts the city of the Sunset Sea is once more attracting the attention of municipal students to the Southwest. The watchword of Galveston was concentration; that of Los Angeles is elasticity. There is between Galveston and Los Angeles not only a decade of municipal history; there is an epoch!

¹ See pp. 88, 89.

² See pp. 23, 24.

CHAPTER XX

MUNICIPAL EFFICIENCY

SOCIAL EFFICIENCY

THE superstition of municipal inefficiency is passing with the discovery of the meaning of efficiency. The inefficiency of American government has been disheartening to the good citizen. The efficiency of big business has been demoralizing to the good artisan. The incapacity of the muddling Briton is distressing to his friends; the capacity of the masterful German is terrifying to his enemies. Is not efficiency illusory until the goal is the common good? If the goal of organized industry is profits, it is a success. If its goal is happiness, it is a failure. If the goal of empire is tyranny, it is a success; if its goal is the maximum development of personality in the masses, it is a failure.

The American city has progressed against odds unknown to the private corporation or the imperial tyrant.

There can be no municipal efficiency while public utilities are in private hands. Yet it is not possible to proceed logically to municipal ownership because existing franchises must be respected; most cities are hampered by debts or debt limitations or constitutional limitations; and municipal government is not reassuring to the type of mind that must be converted before municipal efficiency is possible. Municipalities are relatively no more inefficient than private business. Their difficulty is that they must do things on a large arbitrary scale while business chooses its field and its method. Within that field and by that method it fails universally if social efficiency is to be the measure. For example, there is no scientific transportation in America. One of the best street railway systems is that of Minneapolis and St. Paul, but there is no rapid transit in the Twin Cities; there is no regulation of cabs and jitneys to fit a transportation system; there is no science in railway or water termi-

nals. In fact, the ablest railway man of the Northwest has blocked the way to efficiency.

The railway yards of the Pennsylvania Railway in Philadelphia are the best designed in America. They are operated by the ablest railway corporation in America. The trains that travel by various levels with a maximum of convenience come into Broad Street Station in the very heart of the city, within two and a half blocks of the other great station of this metropolitan city, but they come in by stub-end tracks, the acme of waste. The passengers are discharged into a city that has just taken the first halting step to systematize its local transportation. The misgovernment of Philadelphia is a by-word, the apathy of its citizens unparalleled, but the immediate reason for transportation inefficiency is the intrinsic excellence and the independence of management of the Pennsylvania Railway in the segregated function it has arrogantly assumed.

Municipal efficiency is dependent upon the confession of inefficiency on the part of business.

The Indianapolis gas company furnishes gas at 55 cents — cheaper than most municipal plants. It does this on a sliding scale that permits increased dividends with reduced rates. This is the business man's climax of science and economy. The same system is the boast of Boston's gas company, saved from wreckage by one of the ablest of business men. In neither city are gas and electricity coördinated. Lighting, heating, transportation, water and power have not been unified. The economy is no more praiseworthy than the economy of a thrifty housewife who does nothing to solve the domestic labor problem. It is not only petty; it is stifling. It blocks municipal efficiency. The few things that are well managed in Indianapolis and Boston are the chief hindrances to both business and municipal efficiency. Able business men experience arrested development by the success of Lilliputian enterprises. The people are blinded by the success of these little ventures and the failure of the great enterprise of municipal government. They are bluffed by the immature business man's judgment in the face of the unimaginative citizen's ignorance.

The business man, the workingman, and the citizens of both sexes must understand that there was no German industrial efficiency until the state purchase of railways and the municipal

purchase of public utilities set free private capital and established new standards of service.

A MUNICIPAL PROGRAM

A survey of American municipal progress indicates the pressing need and practical possibility of a municipal program. Each city will modify this program according to its immediate needs and potentialities. If a street railway or electric lighting or telephone franchise is expiring, the opportunity is obvious. If the time is ripe for charter revision, it ought to be seized. If the schools can be socialized or the police humanized, why loiter? If a city plan is feasible, let the expert be called in. If the work is to look to the greatest ultimate municipal efficiency, with a radiating influence on business, social and spiritual life, it must follow the most scientific plan that can be deduced from present municipal experience. A comprehensive plan is the greatest guarantee of economy and the greatest inspiration to effort.

There are two fundamental principles in all public work: never make haste; never waste time!

Municipal reform will not be permanent unless municipal functions are of increasing importance. However, since administrative reform is in the air and cities must be emancipated from the dead hand of the past, the time is ripe for each city to secure a small unpaid council (p. 384) on which its best talent will be induced to serve by ease of election and unmistakable responsibility on their part and that of the citizens (p. 387). They should be elected at large by proportional representation (p. 389) or at least by the preferential ballot (p. 388). The citizens should enjoy the use of the initiative, referendum and perhaps the recall (p. 387), in order that they may be educated to understand government and may inform their representatives of the current state of public opinion. Under the council should be a manager or managers, appointed on good behavior, responsible only to the council, chosen from anywhere, and given absolute freedom (p. 386).

The council-manager government opens the door to a career for the ablest young men who will not have to sell themselves to business or risk their reputations in politics.

Home rule is indispensable to municipal efficiency. The

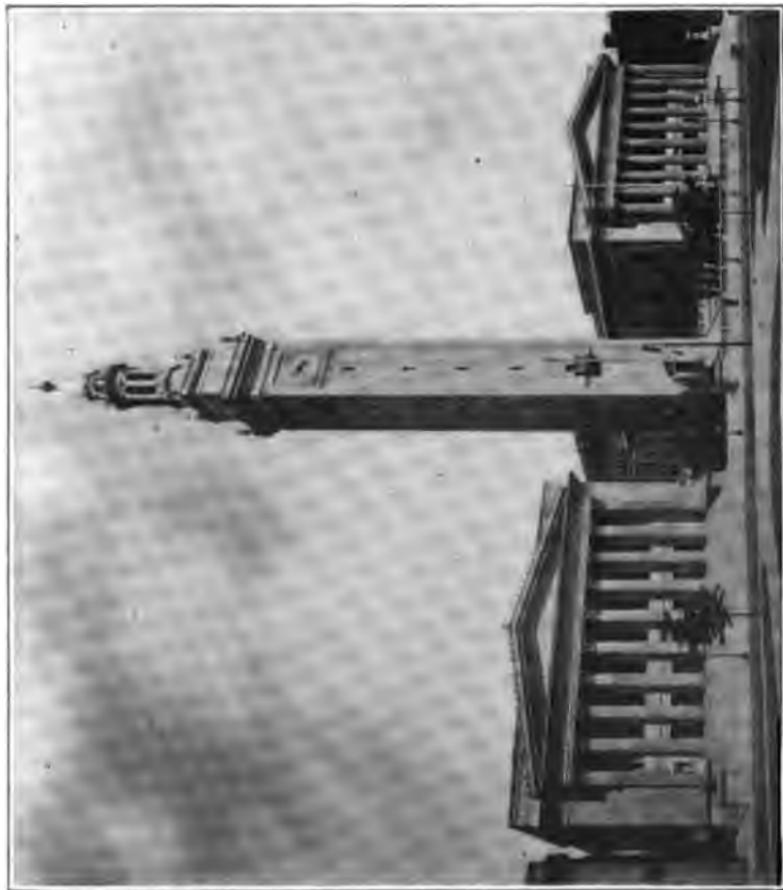
cities must be free to own and operate such utilities as they choose (p. 389). They must have the maximum of elasticity, going beyond their boundaries when desirable in the operation of a public utility (p. 367), and buying in excess of immediate needs if they can thereby enjoy the advantages commonly claimed by business (p. 369). They must be free to merge such functions as water and light or school and library or parks and recreation at their own convenience, and speedily, in order to compete with private business on its own terms (p. 374). The city must have its own bureau of municipal research (p. 380) and be free from the interference of state utility commissions (p. 390). None of these privileges need interfere with the corresponding right of the state or the nation to have home rule within the city limits in those functions that pertain to state or nation.

Obviously the national political parties of this country are as alien to the government of the American city as the political parties of any other nation.

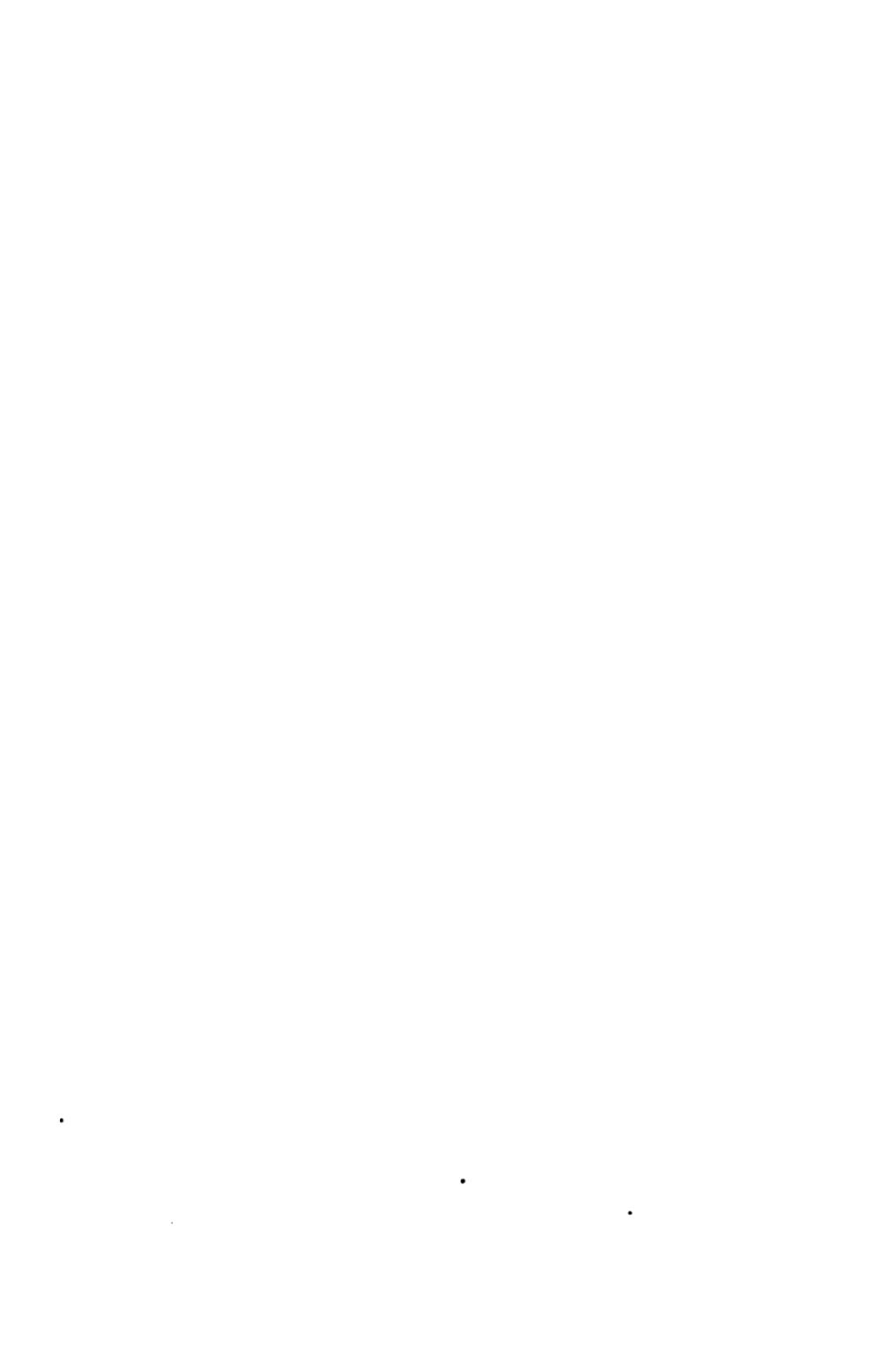
A CITY PLAN

When a city has secured a reasonably simple form of government and equal suffrage (p. 388), or even before, if these are not immediately practicable, it must have a city plan (p. 326). A thousand dollars, or several thousand, spent in the employment of a civic expert is the cheapest investment a city or a group of public-spirited citizens can make. Good transportation is probably the city's greatest physical necessity. This involves a union railway station (p. 13), unless the population is over half a million; the gradual elimination of grade crossings; through routes on both steam and electric lines (p. 30); consolidation of all local lines, including cabs and carts; exclusively municipally owned rapid transit in big cities (p. 52), a share in the profits, in addition to reasonable fares, to provide for municipal ownership (p. 43); the municipal direction of transportation to relieve congestion and build up the city in the most desirable way, regardless of private speculation (p. 331).

A city plan will pay for itself many times every year in the location of thoroughfares and their proper treatment (p. 334). Each city requires a study of street construction with reference to its peculiar needs (Chapter IV). All of the utilities that use



SPRINGFIELD, MASSACHUSETTS, MUNICIPAL GROUP: CITY HALL, AUDITORIUM AND
CAMPANILE.



the streets will be brought under municipal supervision as speedily as possible with a view to ultimate municipal ownership. A municipal conduit system is indispensable (p. 64). There should be a rivalry among all cities to see which will be the first to dispose of its wastes without cost (p. 78). An adequate system of municipal transportation could justify itself by carrying the city wastes off every night and conveying the school children to and from rural schools (p. 83). Economies would have to be effected by correlating all the utilities that could be operated together with advantage (p. 68). A similar economical location and management of schools, libraries, playgrounds, social centers, museums, gymnasiums, baths, and parks would result from scientific city planning (p. 357).

If an architect is employed to build a house, why should amateurs try to build cities?

THE CITY'S LIFE

The city must have an accurate record of its population -- birth, registration, diseases, accidents (p. 107). Motherhood must be revered (p. 115). The people must be better housed (p. 109); the city kept clean (p. 73); food and milk protected (pp. 111, 113); pure water must be had in abundance for all desirable private and public uses (Chapter VI); the health of babies and children must be supervised that the coming generation shall be favored (pp. 116, 118); every bearer of disease must be annihilated (pp. 122, 124, 125, 127, 129).

HEALTH will be spelled in capitals, meaning physical, economic, spiritual, communal health.

Life and property will be protected by adequate fire and police departments (Chapter VIII). These will only be efficient when all the departments of protection and health are coördinated and the employees given the maximum of encouragement to unstinted service. The standards of private business will no more give efficiency than they would in the army. Fire departments will be improved not merely by better apparatus (p. 130); policemen will have a new conception of their duties by being associated with policewomen, by going to a court transformed by a new attitude toward the victims of society (p. 139). Moral deficiency will be measured like physical deficiency to

see how quickly the sufferer can be set free for social usefulness (p. 157). Juvenile courts, psychopathic institutes, boards of public welfare, employment agencies will recognize the undesirableness of a fringe of failure about the city (pp. 165-169). Outdoor education (p. 195), vocational training (pp. 214-224), education for adults (p. 225) will set standards of efficiency unknown in the business world. The saloon, the brothel, commercial amusements, will find cut-throat competition in the community uses of leisure instead of indorsement in the cut-throat competition of business (Chs. XIV, XV, XVI).

The relaxation of leisure will relieve the tension of labor; recreation will build communal life anew.

The hard-headed, practical citizen will have to learn the importance of team play. People need symbols. Witness the power of destruction behind the Kaiser or the power of sacrifice behind the cross! Games, spectacles, festivals, pageants (pp. 321, 324) are as indispensable to efficiency as card catalogues or ledgers. There can be no municipal efficiency worthy of the name until all of the people are consciously united. The social center (Chapter XIV) is as necessary as the bureau of municipal research. Democratic festivals are needed to beat Tammany; pageants may undermine special privilege. Scientific taxation, municipal ownership and city reconstruction can be only spasmodic or sporadic until the schoolhouse and the city hall cease to be the haunt of the time-server and become the shrines of democracy to which all the people make stated pilgrimages.

A simple government that the people can understand is emerging from the complexity that caused the people to seem incompetent. The municipality is becoming more efficient in direct proportion to its increasing democracy. As the city is able to possess the remunerative functions its business methods improve. As it lays its plans for the future with scientific vision its immediate economies multiply. As it spends more for recreation and education the facilities are better administered and the standards rise. As the citizens grow strong in communal achievement they are more kindly to the deficient. The contempt of the self-made man for the unfortunate is not shared by the community-made citizen. With consideration for the lives of the weak comes a finer conception of the worth of life to the strong.

A niggardly public life that made the citizen contemptuous

of public officials is yielding to a dignified and beautiful public service that inspires love for the community and respect for its servants.

The community life is not sound so long as it is negative. Too much effort has been necessary to combat the grafter, the lame duck, the parasite, the tax dodger, the franchise seeker, the apathetic citizen. The community talent is more and more freed for affirmative tasks. Public office becomes more honorable and citizenship more constructive as the work of the municipality increases. The progressive satisfaction of the wants of all of the people has ceased to be a utopian ideal; it is the only reasonable municipal program. A social efficiency beyond the dreams of corporate "efficiency engineers" is in sight of the managers of the democratically governed municipality.

"Bliss was it in that dawn to be alive,
But to be young was very heaven!"

APPENDIX

CHAPTER I

THE CONSERVATION OF THE CITY

1. *Population*

The shifting of population in American cities presents most interesting phenomena but few absolute principles. In general, cities naturally have the largest possibility of doubling or trebling their population when they are small. Southern and Western cities have greater opportunity for expansion than older cities of the East, but the exceptions are quite as interesting as the cities that conform to these doubtful generalizations. In the last decade the cities with a population of over $\frac{1}{2}$ a million had an average growth of over 22 per cent. Those between $\frac{1}{2}$ a million and $\frac{1}{4}$ a million averaged 29 per cent, or including the cities of over $\frac{1}{2}$ a million, 26 per cent. The cities with a population in 1900 of between 100,000 and 250,000 grew 39 per cent on the average, or excluding Los Angeles, which grew 211 per cent, the average of this third class of cities is only one point higher than the second class, namely 30, while the growth of all cities of over 100,000 is 34 per cent, aided by Los Angeles and other larger cities of exceptional growth.

Los Angeles is the only city of 100,000 population that doubled in size in ten years, but four cities passed the 100,000 mark by reason of gaining over 100 per cent in the decade. Of the cities that gained 50 per cent or more, 7 are in the East, 9 in the Middle West, 6 in the South and 8 in the West. This gives a preponderance for the East and the Middle West, where the number of cities increases the possibility of growth and offsets the newness of the West and South. Thirteen cities gained over 100 per cent between 1900 and 1910. Five of these are in the South, one in the East and 7 in the West. The greatest expansion came to Oklahoma City, which had a growth of 540 per cent, starting with 10,000 inhabitants in 1900. The next largest growth was 245 per cent in Birmingham, a city of 38,000 at the earlier period. Los Angeles came next with 211 per cent growth, followed by Seattle with 194 per cent. Spokane increased almost as much—183 per cent. Fort Worth had a 175 per cent growth. Then Schenectady saved the East by squeezing with 130 per cent ahead of Portland, Oregon, with 129 per cent. Oakland grew 124 per cent, Tacoma 122 per cent, Dallas 116 per cent, Wichita 112 per cent and Jacksonville 103 per cent. The largest cities to develop phenomenally were on the Pacific Coast. Seattle, starting with 80,000, Portland with 90,000 and Oakland with 66,000, followed in the wake of Los Angeles. It is easy to account for the

growth of the cities in the Southwest and West, but exceptional local conditions favored Schenectady, Wichita and Jacksonville that outstripped all neighboring cities, except that Wichita must be recorded as within the range of Oklahoma City.

Striking instances of suspended animation are Baltimore that grew less than 10 per cent, Cincinnati and Lowell 12 per cent and Louisville 9 per cent. St. Joseph, Missouri, lost in population apparently, but had probably stuffed the records in 1900 and is now paying the penalty.

After recounting the achievement of the smaller cities, it is still noteworthy that Chicago almost kept up with the average growth of all cities of over 50,000 and did sustain the average of those over 250,000. New York, the octopus, was exceeded in growth by only 48 cities out of 209. The growth of Greater New York was nearly 39 per cent, to which the Borough of the Bronx contributed a gain of 115 per cent and Queens 85 per cent.

CHAPTER II

THE CITY PORTAL

1. *Summary of Seattle Public Harbor Improvements, 1913-1914*

- (1) *Salmon Bay*: Lake Washington ship canal pier, and fishing fleet haven — nearly complete.
- (2) *Smith's Cove*: Lumber, heavy machinery and general merchandise terminal: nearly completed.
- (3) *Bell Street Wharf and Transit Shed*: Complete.
- (4) *Bell Street Concrete Warehouse and Cold Storage Plant*: Nearly complete.
- (5) *Stacy-Lander Wharves and Transit Sheds* (American-Hawaiian terminal): Complete.
- (6) *Whatcom Avenue Concrete Warehouse*: Complete.
- (7) *Hanford Street Wharf and Transit Shed*: Practically complete.
- (8) *Hanford Street Public Grain Elevator*: Nearing completion.
- (9) *Spokane Avenue Wharf and Transit Shed*: Under construction.
- (10) *Spokane Avenue Concrete Warehouse*: For public fruit storage — ready for contract.
- (11) *Spokane Avenue Plant*: For public, fish, cold storage and ice — ready for contract.
- (12) *Elliott Bay Ferry and Landings*: Purchased and operated 1914.
- (13) *Lake Washington Ferry and Landings*: Operated 1914.

CHAPTER IV

THE CITY STREET

1. The income of the commercial lighting plants was 278 million dollars in 1912, an increase of 254 per cent in a decade. Their expenses were 217

million, an increase of 246 per cent. Their employees increased only 163 per cent. The income of municipal plants increased 230 per cent in ten years, their expenses 222 per cent, their employees only 132 per cent. The commercial plants' income increased eight and one-half times as fast as the plants multiplied; the municipal plants only two and one-half times, but both operated with proportionately fewer employees.

2. Display Lighting

Sandusky, Ohio, has collected the following information concerning how display lighting is paid for in other cities:

Dayton, O.—Lighting company pays for installation, city for one-eighth of current, owners and tenants for seven-eighths. Toledo, O.—Cost of all lighting, including residence, assessed on property owners. Akron, O.—All cost of white way lighting assessed against owners. Aberdeen, S. D.—Installation paid for by property owners, who also pay for current. Atlanta, Ga.—Installation by property owners and tenants; current paid for by city. Aurora, Ill.—Merchants assessed \$20.90 for installation, city furnishes current. Buffalo, N. Y.—Business men and company installed system; city pays for current. Cheyenne, Wyo.—Merchants pay for installation and current. Chicago.—Company installed, merchants pay for current. Des Moines, Ia.—Property owners installed system, tenants pay for current. Duluth, Minn.—Property owners pay for system and current. Fort Dodge, Ia.—Property owners pay four-sevenths, tenants three-sevenths. Gary, Ind.—Property owners pay for installation, city furnishes current. Great Falls, Mont.—Property owners pay for installation and current. Los Angeles, Cal.—Property owners pay for installation and seven-eighths of current, city paying one-eighth. Minneapolis, Minn.—Property owners pay for installation, city furnishes current. Mishawaka, Ind.—Merchants pay for current. Superior, Wis.—Property owners pay for installation, tenants pay 7.2 cents per front foot per month. Syracuse, N. Y.—Merchants pay for installation and pay 15 cents per front foot per month for current. Wausau, Wis.—Merchants pay for installation, city for current. Columbus, O.—Merchants pay for installation, municipal plant furnishes current. Kokomo, Ind.—Merchants pay for installation, city for current. Oakland, Cal.—Property owners pay for installation, city for current. Macon, Ga.—Merchants pay for installation and current.

CHAPTER VI

WATER AND SEWERAGE

1. There are three branches of the Boston metropolitan sewerage system. The Charles River system deals with the southern portion of the metropolitan area, ranging from Waltham through the Back Bay district of Boston to the connection with the main Boston system in Huntington Avenue, a length of eight miles. The North Metropolitan system, covering the

district indicated by its name, has a total length of nearly fifty miles, requiring four pumping stations and having its outfall at Deer Island. The third branch, taking in the Neponset valley, has a length of eleven miles.

2. The following cities had erected public comfort stations in 1914: Albany, Atlantic City, Baltimore, Boston, Brooklyn, Cadillac (Mich.), Cambridge, Chicago, Cincinnati, Cleveland, Dallas, Denver, Detroit, Grand Rapids (Mich.), Hartford, Holyoke, Hopkinsville (Ky.), Indianapolis, Jamaica (L. I.), Johnstown, Kansas City (Mo.), Lawrence, Lowell, Macon, Manchester (N. H.), Minneapolis, Newark (N. J.), New York, Oklahoma City, Omaha, Pasadena, Pittsburgh, Providence, St. Louis, Salt Lake City, San Francisco, Seattle, Springfield (Mass.), Springfield (Ill.), Tacoma, Troy, Washington (D. C.), Worcester, Youngstown.

3. The public comfort stations under the Common in Boston, in the City Hall Park and Bryant Park in New York, Grant Park in Chicago, Union Square in San Francisco, City Hall Park in Worcester, the business center of Indianapolis, the Campus Martius in Detroit, the two on the Board Walk, Atlantic City, and the two on Pennsylvania Avenue in Washington are notable.

CHAPTER VII

PUBLIC HEALTH

1. Commissioner Goldwater of New York reported a further reduction of that city's death rate in 1914 to 13.40 per 1000 population. Infant mortality was 6 per cent less than before. In 1914 he saved \$170,472 out of his appropriation of three and one-half million. He had the sanitary code virtually rewritten, adding requirements that patent medicines shall have ingredients named on label; that theaters shall be better ventilated and lighted; that hospitals and physicians shall report occupational diseases and injuries and food poisonings. It was required that no infected persons shall handle food; that children shall be physically examined at time of entering school; that owners or lessees of marsh lands shall fill them in to prevent mosquito breeding; that harmful dust be removed from work-rooms by suction devices. Among prohibitions were offensive practices in tobacco manufacture; the free distribution of samples of proprietary medicines; unmuzzled dogs in streets; wood alcohol in preparations for human food or drink. Also he made regulations as to the bacterial content of milk and cream; care of children's health in day nurseries; handling and storing food in stores, factories and hotels; coffin seals in cases of death from infectious diseases.

2. The Tenement House Act for Towns (Mass. 1912) specifies that no tenement house shall occupy more than 65 per cent of a corner lot; nor more than 50 per cent of any other lot; no tenement shall exceed in height the width of the widest street upon which it stands; there must be a rear yard at least twenty-five feet deep extending across the full width

of the lot; every room must have a window to the outer air and the area must be at least one-seventh of the floor space; every apartment shall have within it a sink and water closet, both provided with running water; no room in basement or cellar shall be occupied for living purposes and every tenement house must have two independent flights of stairs.

3. Outdoor Markets

Antigo (Wis.), Boston, Chicago, Denver, Des Moines, Detroit, Dubuque, Duluth, Grand Rapids, Hoboken, Ithaca, Joliet, Los Angeles, Louisville, Memphis, Milwaukee, Newberry (Pa.), New York, Norfolk, North Lansing, Oklahoma City, Omaha, Orange, Perth Amboy, San Antonio, Savannah, Sheboygan (Wis.), Sioux City, South Bend, Spokane, Stevens Point (Wis.), Tacoma, Washington (D. C.), Wilkes-Barre.

Indoor Markets

Albany, Baltimore, Boston, Buffalo, Canton, Charleston (S. C.), Chattanooga, Cincinnati, Cleveland, Columbus, Dayton, Fort Wayne, Galveston, Grand Rapids, Houston, Indianapolis, Jackson, Kansas City (Mo.), Knoxville, Lansing, Louisville, Macon, Madison, Nashville, New Albany (Ind.), New Orleans, New York, Philadelphia, Pittsburgh, Richmond (Ind.), Richmond (Va.), Roanoke (Va.), Rochester (N. Y.), St. Louis, St. Paul, Scranton, Seattle, Toledo, Washington (D. C.), Wichita, Youngstown.

4. The scope of the work of the department of medical inspection of schools of Philadelphia is described as follows: (1) Detection and correction of physical defects; (2) detection and exclusion of contagious disease cases; (3) sanitary inspection of school buildings; (4) examination at their homes of absentee children, in order to determine whether such children should be excused from school; (5) the examination of applicants for the position of school janitor; (6) examination of high school boys entering into athletic contests; (7) a clinic for the examination of mentally deficient children; (8) special medical supervision of three open air schools; (9) free vaccination of school children.

Rochester has 12 medical school inspectors, 11 men and 1 woman, working under the direction of the Health Bureau, for the physical inspection of 19,381 school children in 36 public schools, an average of 1615 pupils to each medical inspector. In 1912 the work of each medical inspector averaged as follows: vaccinations, 450; visits to sick poor, 200; office calls to sick poor, 100; maternity cases, 2; insane examinations, 40.

The medical inspector is also called upon to make a weekly sanitary survey of the school, covering heat, lighting, ventilating and cleanliness; to make a physical inspection of each child during every school year, and to record his findings on a card, so arranged as to follow up the child from grade to grade, and to present a written statement on one card of the physical condition of the child during its entire school life.

5. An effective agitation against rats has been carried on in Galveston, Seattle, Natchez, Mobile, Charleston and Jacksonville. In 1914 over 26,000 rats were examined by the federal Public Health Service in Seattle.

CHAPTER VIII

PROTECTION

1. Macon, Georgia, with a population of 40,000, has eleven gasoline vehicles. Topeka, Kansas, has eliminated all but two pieces of horse-drawn apparatus.

2. Comparative Statement of Fire Protection Cost

CITY	POPULA-TION (ES-TIMATED)	AREA SQUARE MILES	EXPENDITURES	APPARA-TU-RS NO. OF	TOTAL FORCE	PER CAPITA COST
1. New York City	5,270,000	320	\$8,945,945.40	837	4976	\$1.66
2. Chicago, Ill.	2,393,325	191 $\frac{1}{2}$	3,359,313.50	319	1855	1.40
3. Philadelphia, Pa.	1,070,000	129	1,380,900.70	299	1171	.82
4. St. Louis, Mo.	831,570	61 $\frac{1}{2}$	1,205,787.79	118	823	1.45
5. Boston, Mass.	723,562	47 $\frac{1}{2}$	1,817,602.36	292	961	2.51
6. Baltimore, Md.	578,000	31 $\frac{1}{2}$	1,647,899.74	85	764	1.92
7. Pittsburgh, Pa.	557,772	41	1,323,437.99	119	811	2.35
8. Buffalo, N. Y.	450,000	42	1,100,125.74	63	505	2.44
9. San Francisco, Cal.	450,000	46 $\frac{1}{2}$	1,545,820.79	78	793	3.43
10. Milwaukee, Wis.	400,000	24 $\frac{1}{2}$	836,906.95	59	325	2.90
11. New Orleans, La.	340,000	196 $\frac{1}{2}$	482,338.95	99	435	1.40
12. Minneapolis, Minn.	335,000	53	595,750.00	63	420	1.79

3. Municipal Police Departments

CITY	POPULATION, U. S. ESTI- MATE, 1914	NO. OF PATROL- MEN PER 10,000 POPULA- TION	NO. OF PATROL- MEN ON DUTY PER 10,000 POPULA- TION	NO. OF PATROL- MEN PER SQUARE MILE OF CITY'S AREA	NO. OF PATROL- MEN ON DUTY PER SQUARE MILE OF CITY'S AREA	POPULA- TION PER PATROL- MAN ON DUTY
New York	5,333,537	17	5.7	28	9.3	1728
Chicago	2,393,325	14	4.7	17	5.7	2107
Philadelphia	1,657,810	19	6.3	25	8.3	1560
St. Louis	734,667	19	6.3	23	7.7	1573
Boston	733,802	19	6.3	30	10.0	1571
Cleveland	639,431	11	5.6	13	6.5	1881
Baltimore	579,500	14	4.7	25	8.3	2204
Pittsburgh	564,878	12	4.0	17	5.7	2424
Detroit	537,650	17	5.7	21	7.0	1774
San Francisco	448,502	17	5.7	17	5.7	1692
Milwaukee	417,054	12	4.0	20	6.7	2497
Cincinnati	402,175	13	4.3	7	2.3	2325
New Orleans	361,221	7	3.5	1	0.5	2937
Average 13 cities		15	5.1	19	6.4	2021

4. American cities employing policewomen and the approximate number employed in 1914:

Aurora (Ill.), 1; Baltimore, 5; Bellingham (Wash.), 1; Boston, 1; Chicago, 30; Colorado Springs, 1; Dayton, 2; Denver, 1; Fargo (N. D.), 1; Grand Forks (N. D.), 1; Jamestown (N. Y.), 1; Kansas City (Mo.), 1; Los Angeles, 5; Minneapolis, 2; Omaha, 1; Pittsburgh, 4; Plainfield (N. J.), 1; Portland (Ore.), 1; Poughkeepsie, 1; Racine (Wis.), 1; Rochester (N. Y.), 1; St. Paul, 3; Salem (Mass.), 1; San Antonio, 1; San Francisco, 3; Seattle, 5; Sioux City, 1; Superior, 1; Syracuse, 1; Tacoma, 1; Topeka, 2.

5. The figures for Chicago are more complete than those of New York's accidents, but show a similar tendency. The contrast between 1910 and 1913 may be tabulated as follows:

1910 — 3969 trolley accidents, of which 175 were fatal.
1596 horse and horse vehicle accidents, of which 67 were fatal.
998 motor accidents, of which 52 were fatal.

1913 — 4283 trolley accidents, of which 165 were fatal.
1383 horse and horse vehicle accidents, of which 44 were fatal.
2029 motor accidents, of which 136 were fatal.

6. List of Cities which have had Vice Investigations and have made Reports

Atlanta, Baton Rouge (La.), Bay City, Boston (no report except in Mass.), Chicago, Cleveland, Denver, Elmira, Grand Rapids, Hartford, Kansas City (Mo.), Lafayette (Ind.), Lancaster (Pa.), Little Rock, Minneapolis, Newark (N. J.), New York, Philadelphia, Pittsburgh, Portland (Me.), Portland (Ore.), Richmond (Va.), St. Louis, Schenectady, Shreveport (La.), Syracuse.

State Commissions were appointed in Illinois and Missouri in 1913, but have published no reports.

7. List of Cities with Standing Morals Commissions

Chicago, Denver, Minneapolis.

A Board of Public Morals was created in the department of public safety in cities of the second class (Pittsburgh and Scranton) in Pennsylvania by a 1913 act, for the purpose of investigation and acting upon all questions relating to the matter of vice control. The board consists of seven members, three of whom may be women, appointed by the mayor and approved by the council. The board elects a superintendent from their own number who is to give his entire time to the work of the board.

8. Red Light Injunction statutes are now in effect in some form in the following states and the District of Columbia: Massachusetts, Pennsylvania, New York, Tennessee, Nebraska, Minnesota, Wisconsin, Kansas, South Dakota, North Dakota, Utah, Oregon and Washington.

CHAPTER IX

JUSTICE AND CHARITY

1. In the juvenile courts of the following cities there have been developed one or more specialized lines of social work in connection with probation: Washington (D. C.), Pittsburgh, Louisville, Kansas City (Mo.), Portland (Ore.), Seattle, Des Moines, Chicago, New York (Boroughs of Richmond and Brooklyn), Newark and Elizabeth (N. J.), Indianapolis, Salt Lake City, Los Angeles and San Francisco, Minneapolis and St. Paul, Denver, Cleveland, Columbus, Toledo, Grand Rapids and Cincinnati.

The list of activities differentiated from or grafted on to the probation departments includes placing-out and employment agencies, clinics, educational classes, recreational groups and camps, relief measures and pensions.

The Baltimore Juvenile Court claims to give its wayward children the benefits of a detention home by farming them out to private philanthropies (chiefly ecclesiastical) at from 21 to 60 cents a day, whereas it costs \$5 in the Washington and St. Louis Detention Houses.

2. Two women assistants were appointed in the St. Louis Juvenile Court in January and four in the Philadelphia Municipal Court in March, 1915.

3. *Department of Public Welfare, City of Cleveland*

Division of Health

- Bureau of Child Hygiene
- Bureau of Communicable Diseases
- Bureau of Tuberculosis
- Bureau of Food and Dairy Inspection
- Bureau of Sanitation
- Bureau of Laboratories
- Bureau of Vital Statistics

Division of Charities and Correction

- City Hospital
- Outdoor Relief
- Colony Farm
- Overlook Farm (Tuberculosis Sanatorium)
- Correction Farm
- Girls' Farm
- Boys' Farm

Division of Employment

- Employment Bureau
- Immigration Bureau
- Vocational Guidance

Division of Recreation

- Use of Leisure Time
- Use of Parks
- Use of Bathing Beaches

Use of Bath Houses

Use of Gymnasiums and Social Centers

Use of Playgrounds

Municipal Orchestra

Division of Publicity and Research

Collection of Social Data

Exhibits

Literature

Lectures

4. *Statement showing Known Annual Expenditures in Fourteen States of the Union, under Mothers' Relief Laws, with Accompanying Approximate Statistics relative to Same:*

STATE (OR LOCALITY IN STATE)	TOTAL RELIEF GRANTED PER ANNUM, 1913-1914	NUMBER OF FAMILIES BEING RELIEVED	AVERAGE COST PER MONTH		AGE LIMIT	AVERAGE NUMBER OF CHILDREN PER FAMILY
			Per Family	Per Child		
1. <i>California</i> (includes Sacramento, Los Angeles, San Francisco, Oakland, etc.) . . .	\$450,000.00	1,468	\$25.54	\$7.53	14	3.4
<i>Note.</i> — San Francisco has provided figures opposite included above	1914-1915 107,520.00	114	21.33		14	3.3
2. <i>Colorado</i> (City and County of Denver)	10,000.00	30	27.02	8.37	16	3.3
3. <i>Idaho</i>	Ex 1,440.00	8	15.00	10.00	15	1.5
4. <i>Illinois</i> . Cook County (includes Chicago)	100,253.32	442	24.02	7.56	14	3.3
5. <i>Massachusetts</i> . Boston. Prior to Nov. 30, 1914, \$250,000 appropriated	160,000.00	1,500	8.89		14	
6. <i>Minnesota</i> . Jan. 1, 1914 Hennepin County (includes Minneapolis) Ramsey County (includes St. Paul)	24,000.00	113	15.94	6.93	14	2.3
7. <i>Missouri</i> . Jackson County (includes Kansas City)	75	10.90	3.43			3.2
8. <i>New Hampshire</i> . Concord	10,612.80	64	14.74	4.21	14	3.5
9. <i>New Jersey</i> . Hudson County (includes Jersey City). \$35,000 appropriated for 1915	5,000.00				16	
	8,482.67	65	10.87	4.35	16	2.5

STATE (OR LOCALITY IN STATE)	TOTAL RELIEF GRANTED PER ANNUM, 1913-1914	NUMBER OF FAMILIES BEING RELIEVED	AVERAGE COST PER MONTH		AGE LIMIT	AVERAGE NUMBER OF CHILDREN PER FAMILY
			Per Family	Per Child		
10. <i>Ohio.</i> From May 1 to Dec. 15, 1914. Hamilton County (includes Cincinnati). Appropriation 1914-1915 is \$63,000						
11. <i>Pennsylvania.</i> Allegheny County (includes Pittsburgh) Philadelphia	42,228.00	364	21.06	6.31	G 16 B 17	3.3
12. <i>Utah.</i> Salt Lake City and County	26,000.00	102	21.24		14	
13. <i>Washington.</i> Kings County (includes Seattle)	9,985.25	131	24.66	6.52	14	3.8
14. <i>Wisconsin.</i> Milwaukee	E 30,000.00	252	3.31		15	
		510	5.10		14	2.9
		237	13.15	4.11		3.2

Note. — E means estimated figure based on highest and lowest figures available.

5. Municipal lodging houses are also found in Baltimore, Buffalo, Cincinnati, Dayton, Denver, Minneapolis, Providence, Seattle, Syracuse and Washington.
6. *Agreement between the Industrial Commission of Wisconsin, the Common Council of the City of Milwaukee and the Board of Supervisors of the County of Milwaukee*

In pursuance of Chapter 462, Laws of 1913, it is hereby mutually agreed between the Industrial Commission of Wisconsin, the Common Council of the City of Milwaukee and the Board of Supervisors of the County of Milwaukee that they will jointly conduct the Free Employment Office in Milwaukee according to the following plan:

The Industrial Commission will pay all the salaries and administrative expenses. The Common Council and the Board of Supervisors will pay all local expenses, including rent, light, heat, janitor and telephone service. The expenditure of the funds voted by the City Council and the Board of Supervisors shall be controlled and approved by the Citizens' Committee on Unemployment, composed of five members each from the Common Council, the County Board of Supervisors, the Merchants' and Manufacturers' Association of Milwaukee and the Federated Trades Council. The proportion in which the City and County shall contribute to the maintenance of the office shall be three parts by the City and two parts by the County.

The Citizens' Committee on Unemployment shall, as heretofore, submit an annual written report to the Common Council and to the Board of Supervisors, giving an account of all expenditures and of the work of the Free Employment Office.

CHAPTER X

INDOOR EDUCATION

1. *Organization of the Cincinnati Public School System*

I. College for Teachers. (Organized 1905.)
II. High Schools. (Organized 1847.)

A. Academic Courses:

- (a) General Course. (Established 1847.)
- (b) Classical Course. (Established 1847.)
- (c) Manual Training Course. (Established 1906.)
- (d) Domestic Science Course. (Established 1906.)

B. Technical Courses:

- (e) Commercial Course. (Established 1910.)
- (f) Boys' Coöperative Course. (Established 1910.)
- (g) Girls' Coöperative Course. (Established 1910.)
- (h) Art Course. (Established 1910.)
- (i) Music Course. (Established 1910.)

III. Elementary Schools:

1. Regular Elementary Schools. (Organized 1828.)
2. Special Elementary Schools:

- (a) Oral School for the Deaf. (Organized 1888.)
- (b) School for the Blind. (Organized 1905.)
- (c) Schools for Foreigners. (Organized 1906.)
- (d) Boys' Special School. (Organized 1907.)
- (e) Schools for Mental Defectives. (Organized 1907.)
- (f) Schools for Retarded Pupils. (Organized 1908.)
- (g) Continuation School for Apprentices. (Organized 1909.)
- (h) Schools for Exceptionally Bright Pupils. (Organized 1910.)
- (i) Elementary Industrial Schools. (Organized 1911.)
- (j) Compulsory Continuation Schools. (Organized 1911.)
- (k) Open air Schools. (Organized 1912.)
- (l) School for Stammerers. (Organized 1912.)

3. Special Departments:

- (a) German. (Organized 1840.)
- (b) Penmanship. (Organized 1841.)
- (c) Music. (Organized 1844.)
- (d) Physical Training. (Organized 1860.)
- (e) Drawing. (Organized 1864.)
- (f) Manual Training. (Organized 1905.)
- (g) Domestic Science. (Organized 1905.)

IV. Kindergartens. (Organized 1905.)

V. Evening Schools. (Organized 1840.)

1. Evening Elementary Schools. (Organized 1840, for boys; organized 1855, for girls; discontinued 1883; reorganized 1892.)
2. Evening High Schools:
 - (a) Academic. (Organized 1856; discontinued 1883; reorganized 1904.)
 - (b) Commercial. (Organized 1907.)
3. Evening Schools for Foreigners. (Organized 1905.)
4. Evening Industrial Schools. (Organized 1906.)
5. Evening Gymnastic Classes. (Organized 1912.)
6. Evening School for Stammerers. (Organized 1912.)

VI. Summer Schools:

1. Vacation Schools. (Organized 1906.)
2. Summer Academic — Elementary and High. (Organized 1908.)
3. Playgrounds. (Organized 1909.)
4. Gardening. (Organized 1912.)

VII. Social Centers. (Organized 1913.)

2. The Eugene Field school has for some time been working to vitalize its civics course. Mr. Kent, the principal, has drawn up the following plan of study.

SUGGESTIVE TOPIC ORDER ON CHICAGO

1. The Glacial Period.
2. The Three Stages of "Lake Chicago."
3. That which underlies Chicago.
4. The French and English in the Chicago Region.
5. The Northwest Territory.
6. The Indians and the Chicago Region.
7. Fort Dearborn, The Massacre, War of 1812, etc.
8. Illinois as a Territory and State, — capitals, etc.
9. Chicago in Historical Steps, — Annexations, etc.
10. The Illinois-Michigan Canal.
11. The "Fight for Life in Chicago."
12. The Sanitary District and Canal.
13. The Chief Lines of Industry, —
 - (a) Steel and Iron.
 - (b) Manufacture of Agricultural Machinery.
 - (c) The Packing Industry.
 - (d) Elevator, Milling, etc. (The Empty Boat.)
 - (e) Electrical Goods. (Hydro-electric Power.)
14. The Great Chicago Fire.
15. The World's Columbian Exposition.
16. Parks and Playgrounds.
17. Homes and Housing.
18. The Chicago City Government.
19. The Courts and their Work.

20. Cook County, — naming, size, area, relation to Chicago, etc.
21. The Plan of "Chicago Beautiful."
22. Educational System and Institutions.
 - (a) Illinois Institutions.
 - (b) Cook County Institutions.
 - (c) Chicago Institutions:
Museums, Libraries, Hospitals, Private Schools, Universities, Social Centers, Settlements, Historical Bodies, Civic Organisations, Philanthropic Organizations.

3. Athletics is compulsory for all pupils in Boston's high schools. The courses have been carefully worked out by Dr. T. F. Harrington, director; one for boys and one for girls. The work will count two points each year toward a diploma. All boys are required to take military drill throughout the four years. One point is given on it, 50 per cent for carriage and posture. Athletics secures the other point.

"In the first year in the high school each boy must qualify in a dash; one form of jumping; putting shot (5 pounds); chinning (pull-ups); swimming. These are divided as follows: 50-yard dash, 8 seconds; running high jump, 3 feet; running broad jump, 11 feet 6 inches; standing broad jump, 5 feet 6 inches; putting shot, 25 feet; chinning, 3 times; swimming, 10 strokes without stopping.

"In the second year each boy must qualify in a dash, two forms of jumping, putting shot (8 pounds), chinning, three swimming events. Each year requires a little more advanced work than the work of the year before. Swimming includes diving, 20-yard dash in 35 seconds and a 60-yard dash without stopping.

"In the third year each boy must qualify in one dash and one run, two forms of jumping, putting shot (8 pounds); chinning and three swimming events, all a little harder than those of the preceding year.

"In the fourth year the pupil must be able to do a 100-yard dash in 14 seconds; 440-yard run (for boys 16 years old or over) in 1 minute and 20 seconds; running high jump, 4 feet 6 inches; running broad jump, 15 feet; standing broad jump, 7 feet; putting shot (12 pounds), 26 feet; chinning 7 times; swimming, 220 yards without stopping; carrying burden in water; care of comrades.

"Each girl is obliged to pursue one or more forms of outdoor recreation selected from a given list. This includes archery, golf, rowing, skiing, bicycling, croquet, sailing, tennis, ball games, canoeing, skating, cross-country walking, horseback riding. In each of the four years regular gymnasium work must be done. It counts one point, 50 per cent for posture and carriage. The other 50 per cent is given for marching, free standing exercises, apparatus work, dancing, games and plays. The second point includes in the first year besides one outdoor recreation, one dash event, one form of jumping; second year, one dash event, two forms of jumping, swimming 10 strokes without stopping, two outdoor recreations; third year, one dash event, two forms of jumping, swimming 40 yards without stopping, three

outdoor recreations; fourth year, one dash event, two forms of jumping, swimming 60 yards without stopping, diving (optional), carrying burden in water, four outdoor recreations."

4. *From the Annual Report of the Birmingham Public Schools for the year ending June 30, 1913.*

OUTLINE OF LECTURES

- I. The Relation of Mother to Child from Conception until the Age of Entering School:
 - (a) The Physiology of Pregnancy.
 - (b) The Obligations of the Mother to the Unborn Child.
 - (c) Prenatal Influences.
 - (d) The Laws of Heredity.
 - (e) The Age at which Most Children Receive Sex Enlightenment and its Usual Sources.
 - (f) The Mother's Duty to Anticipate with Suitable Instructions these Influences.
 - (g) The First Lessons in Sex Enlightenment.
- II. The Normal Phenomena of Adolescence:
 - (a) Reproduction Our Highest and Most Sacred Function.
 - (b) The Significance of Menstruation and Its Physiology.
 - (c) The Fallacy of the Current Belief that Continence is Harmful. Its Necessity and Value.
 - (d) The Consequences of Abuse and Unethical Exercise of the Reproductive Functions.
 - (e) The Social Diseases and the Widespread Suffering Caused by Them, both in the Guilty and in the Innocent.
 - (f) The Material, as well as Moral, Value of Clean Thoughts, Reading and Conversation, and the Beneficial Influence of Physical Exercise.
 - (g) The Parents' Duty to frankly Teach these Facts to the Adolescent Boy or Girl.
- III. The Hygiene of the Home:
 - (a) Cleanliness, Apparent and Real.
 - (b) Food — Kind, Amount, Preparation.
 - (c) Fresh Air — Its Value in Promoting Health and in Preventing Diseases.
 - (d) Tuberculosis in its Relation to the Home.
 - (e) Typhoid Fever in its Relation to the Home.
 - (f) Scarlet Fever and Other Infectious Diseases in Their Relation to the Home.
 - (g) Notable Disease Carriers, — the Mosquito, the Bedbug, the Fly, the Rat.
- IV. The Problem of the Child:
 - (a) His Nervous System and Early Training.
 - (b) The Value of Sleep.
 - (c) His Exercise.
 - " Food.

5. Public day schools for mentally defective pupils are maintained by Cincinnati, New York, Rochester, Providence, Baltimore, Milwaukee, Cleveland, Chicago, Boston, Philadelphia, St. Louis and other cities.

CHAPTER XI

OUTDOOR EDUCATION

1. The cities that have done most in regular organized school and home garden work are: on the Pacific slope, Los Angeles, Fresno, Oakland and Portland; in the West and Middle West, St. Paul, Minneapolis, Lincoln, St. Louis, Dubuque, Chicago, Grand Rapids, Detroit, Cleveland, Dayton, Cincinnati, Louisville, South Bend and East Chicago; in the East and South, Boston, Brooklyn, Springfield, Providence, New Haven, North Adams, Rochester, Yonkers, Buffalo, New York City, Philadelphia, Pittsburgh, Hampton, Richmond, Rock Hill, Athens, Atlanta, Birmingham, Washington and Memphis.
2. *Comparison of the Number of Users of Various Recreational Facilities of the Twelve Small Parks of the Chicago South Parks System with the Number of Users of the Corresponding Facilities at the Emerson School at Gary for Twelve Months.*

	CHICAGO RECREATION PARKS		EMERSON SCHOOL
	Average	Highest	
Outdoor gymnasium	164,314	278,498	1,200,000
Indoor gymnasium	25,750	45,793	330,000
Swimming pools	60,400	115,542	140,000
Library reading room	48,940	85,933	300,000

CHAPTER XII

HIGHER EDUCATION

1. *The Athenian Oath — Richmond, Indiana, Junior High School.* —

“We will never bring disgrace to this, our City, by any act of dishonesty or cowardice, nor ever desert our suffering comrades in the ranks.

“We will fight for the ideals and sacred things of the City, both alone and with many.

“We will serve and obey the City's laws and do our best to incite a like respect and reverence in those above us who are prone to annul or set them at naught.

“We will strive unceasingly to quicken the Public's sense of civic duty.

"Thus, in all these ways, we will transmit this city not only not less, but greater; better and more beautiful than it was transmitted to us."

The Chicago vacation schools are opened with exercises which include the singing of a patriotic hymn, the saluting of the American flag and the repetition of the Civic Creed.¹

"God hath made of one blood all nations of men, and we are his children, brothers and sisters all. We are citizens of these United States, and we believe our Flag stands for self-sacrifice for the good of all the people. We want, therefore, to be true citizens of our great city, and will show our love for her by our works.

"Chicago does not ask us to die for her welfare; she asks us to live for her, and so to live and so to act that her government may be pure, her officers honest, and every corner of her territory shall be a place fit to grow the best men and women who shall rule over her."

2. ". . . Los Angeles . . . provides the following vocational curriculums: Commercial art, hand-wrought metal work, interior decorating, leather work, pottery work, general farmer, specialty farmer, truck gardener, landscape-gardener, nursery man, dairy-farmer, poultry man, farm mechanic, multigraph operator, adding-machine operator, filing clerk, billing clerk, office assistant, office manager, accountant, auditor, bank clerk, book-keeper, cashier, stenographer, reporter, private secretary, shipping-clerk, receiving clerk, business manager, post-office employee, civil service employee, commercial teacher, caterer's assistant (cooking and supplying home-made articles for delicatessen stores and private families), teacher domestic science and art, housekeeper, waitress, dressmaker, milliner, seamstress, boat-builder, engineer (marine-gasoline), merchant marine, naval architect, aquarian architect, cataloguer of marine life, chart designer, curator of museums, fish commissioner, fish expert, fish propagator, assayer, blacksmith, cabinet-maker, chemist, architectural draughtsman, mechanical craftsman, foundryman, central station electrical work, sub-station electrical work, telephone work, electric-light work, electrician, machine-shop work, pattern-making and surveying — being sixty-six in number."

3. *Wisconsin. Chapter 420, Laws of 1915*

"Whenever an industrial, continuation or commercial school shall be established . . . in any town, village or city, any minor in employment between the ages of sixteen and seventeen, residing in such town, village or city, shall attend such school in the daytime not less than five hours per week for six months in each year or four hours per week for eight months, as may be determined by the local board of industrial education. Every employer shall allow all such minor employees a reduction in hours of work of not less than the number of hours the minor is by this section required to attend school. Whenever the working time and the class time coincide, such reduction in hours of work shall be allowed at the time when the classes which the minor is by law required to attend are held.

¹ Composed by Miss Mary McDowell of Chicago.

" . . . Whenever any day continuation classes, industrial school or commercial school shall be established in any town, village or city in this state for minors between the ages of fourteen and sixteen, working under permit as now provided by law, every such child, residing within any town, village or city in which any such school is established, shall attend such school in the daytime not less than five hours per week for . . . *eight* months in each year, until such child becomes sixteen years of age, or four hours per week for . . . *ten* months, as may be determined by the local board of industrial education, and every employer shall allow all minor employees over fourteen and under sixteen years of age a reduction in hours of work of not less than the number of hours the minor is by this section required to attend school."

CHAPTER XIII

PUBLIC LIBRARIES AND MUSEUMS

1. *State Library Commissions*

Alabama Department of Archives and History,
Division of Educational Extension.

Arkansas State Library Commission.

California State Library.

Colorado Board of Library Commissioners.

Colorado Traveling Library Commission.

Connecticut Free Public Library Committee.

Delaware Free Library Commission.

Georgia Library Commission.

Idaho State Library Commission.

Illinois Library Extension Commission.

Indiana Public Library Commission.

Iowa Library Commission.

Kansas Traveling Libraries Commission.

Kentucky Library Commission.

Maine Library Commission.

Maryland State Library Commission.

Massachusetts Free Public Library Commission.

Michigan State Board of Library Commissioners.

Minnesota Public Library Commission.

Missouri Library Commission.

Nebraska Public Library Commission.

New Hampshire Public Library Commission.

New Jersey Public Library Commission.

New York State Education Department,
Division of Educational Extension.

North Carolina Library Commission.

North Dakota Public Library Commission.

Ohio Board of Library Commissioners.

Oregon State Library.

Pennsylvania Free Library Commission.
 Rhode Island Department of Education,
 State Committee on Libraries.
 South Dakota Free Library Commission.
 Tennessee Free Library Commission.
 Texas Library and Historical Commission.
 Utah State Board of Education.
 Vermont Board of Library Commissioners.
 Virginia State Library.
 Washington State Library Commission.
 Wisconsin Free Library Commission.

2. In the Business Branch of the Newark Public Library a large amount of printed matter has been brought together, consisting of books, maps of railway routes, freight routes, express lines, time tables, steamship routes and lines, directories — not of cities only, but of trades and occupations of many kinds — trade journals, devoted to manufacturing in general, to machinery, the problem of one particular class of objects, to advertising and salesmanship, house organs devoted to the promotion of individual firms, and journals devoted to the welfare of employees, reports of scientific societies, magazines relating to all aspects of finance, commerce, administration and business efficiency, city directories, telephone directories, Blue Book and social directories of all large cities in the world.

The technical room contains an extensive collection of works on technical subjects. The reading room of the library is used extensively by mechanics, engineers and other men of technical training who find there all the principal technical journals and pamphlets issued by the engineering societies. The Business Branch Library answers more than one thousand questions a day.

The Christian Science Monitor records: "Statistics from that city show that in a year 25,000 people use the 1000 city, state, trade and foreign telephone directories; 7000 use the 1200 maps and 25 atlases; 10,000 consult the reference books; 600 use the typewriter; 3000 telephone for and receive information upon business matters. Of the 42,000 men who use the directories, maps and reference books, 37,500 help themselves. The 3000 telephone calls represent a very important means of service. These calls increase in number steadily. They cover a wide range of subject matter, and require versatility in the attendants. 'Please give me the names of some box manufacturers in Pennsylvania?' 'What is the membership fee in the Institute of Civil Engineers in England?' 'Who is the British Consul General at Algiers?'"

3. The following cities have Municipal Reference Libraries: Baltimore¹ (City Hall), Brooklyn, Chicago (City Hall), Cincinnati¹ (City Hall), Cleveland (Public Library), Fort Wayne (Public Library), Los Angeles, Milwaukee (City Hall), Minneapolis (Public Library), New York (Municipal Building), Oakland (City Hall), Philadelphia (Free Library branch), Pittsburgh¹ (H. W. Oliver Building), Portland, Oregon (City Hall), St. Louis (City Hall), San Francisco (City Hall), Seattle (Public Library).

¹ Not under Public Library management.

4. The development of high school libraries first received serious attention about 1890, at which time there were less than 2500 public high schools in this country housing a library. In 1912, as a result of a questionnaire sent out by the Bureau of Education, it was shown that of the 11,224 schools listed of secondary grade, 10,329 reported libraries. There are several different types of high school libraries:

(1) The high school library maintained by the Board of Education strictly as a piece of school apparatus for the use of the students and teachers alone, and housed in a school building under the supervision of a teacher or sometimes a trained librarian. The high school libraries of Spokane, Detroit, and Washington, D. C., are excellent examples of this type.

(2) The public school library. These are libraries of considerable size, under School Board management, frequently housed in the high school or in an annex of a high school, and organized for the purpose of supplying books to all the schools in the city. The central library is under the supervision of a trained worker, branch libraries are established in each of the public schools, and in many instances classroom libraries are provided. The high school libraries in Columbus, Ohio, and Albany, New York, are of this type.

(3) A branch of the public library located in the high school building or merely a collection of books lent to the school by the public library for a definite period of time. Books are lent to meet the current demands of teachers and students and are changed as often as the demand necessitates. The school furnishes the room, heat, light, janitorial service, and some general reference books, the public library supplying the books for general circulation or special use. Sometimes the public library supplies an attendant to look after the library, while in other cases the school delegates a teacher for that service. Cleveland, Newark (N. J.), Passaic, Portland (Ore.), and Buffalo make use of this form of coöperation between the library and the schools, as do Elmira, Utica, and Madison (Wis.) in slightly modified ways.

(4) The combination school and public library. This is a common arrangement in small towns that are unable to support a public library. The high school building is utilized for the purpose, under the supervision of a teacher. One of the largest of this type of high school libraries is located at Troy, Ohio. There is also one at Canandaigua, New York. (Edward D. Greenman, *Library Journal*, April, 1913.)

5. The library sometimes undertakes vicarious work, as when it encourages children to buy books. Brooklyn and other cities publish a list of books, called *The Children's Own Library*. The Chicago Public Library Finding List of Young People's Books, June, 1912, contains Children's Bibliographies, 320 pp., including the following lists issued by other libraries, individuals and publishing firms:

Baker, F. T., comp. A bibliography of children's reading. (1908.)

Borden, W. A., comp. The best modern novels; a classified list of thirty-five hundred of the best modern novels that are in active use in the public libraries of the United States. 1910.

Boston, Public Library. List of books for boys and girls in the Public Library of the city of Boston. 1904.

Brooklyn (N. Y.). Public Library. Books for boys and girls approved by the Brooklyn Public Library for use in its children's rooms. 1911.

Buffalo. Public Library. Classroom libraries for public schools, listed by grades; to which is added a list of books suggested for school reference libraries. 1909.

Children's catalogue; a guide to the best reading for young people based on twenty-four selected library lists; comp. by M. E. Potter, assisted by B. Tannehill and E. L. Teich. 1909. Published by the H. W. Wilson Company, Minneapolis.

Hyatt, B. E. Biography for young people. 1899. (New York State Library. Bulletin 68, November, 1901. Bibliography 32.)

Kennedy, H. T., *comp.* Suggestive list of children's books for a small library recommended by the Wisconsin Free Library Commission. 1910.

Pittsburgh. Carnegie Library. Annotated catalogue of books used in the home libraries and reading clubs conducted by the children's department. A subject arrangement with author and title index. 1905.

— Catalogue of books in the children's department of the Carnegie Library of Pittsburgh. 1909.

— Gifts for children's book shelves; a list for mothers.

CHAPTER XIV

SOCIAL CENTERS

1. The seventy-one cities which reported for 1912-1913 some paid workers in carrying on evening activities other than those of the regular night school were as follows:

CALIFORNIA	IOWA	MALDEN
Los Angeles	Burlington	Natick
Santa Rosa	Des Moines	Winchester
	Sioux City	Worcester
COLORADO	KANSAS	MICHIGAN
Denver	Leavenworth	Detroit
Pueblo		Grand Rapids
CONNECTICUT	KENTUCKY	Kalamazoo
Stamford	Louisville	Pontiac
Waterbury		
ILLINOIS	LOUISIANA	MINNESOTA
Chicago	New Orleans	Minneapolis
Evanston, Dist. 76	MARYLAND	Red Wing
Oak Park	Baltimore	St. Paul
Ottawa		
Rockford	MASSACHUSETTS	NEW JERSEY
	Boston	Bloomfield
INDIANA	Cambridge	East Orange
Crawfordsville	Chicopee	Elizabeth
Gary	Dedham	Englewood
Mishawaka	Gardner	Jersey City
		Montclair

New Brunswick	NORTH DAKOTA	RHODE ISLAND
Passaic	Grand Forks	Newport
Paterson		
Trenton	OHIO	WEST VIRGINIA
	Canton	Wheeling
NEW YORK	Cincinnati	
Buffalo	Columbus	WISCONSIN
Geneva	Hamilton	Kenosha
New York	Youngstown	Milwaukee
Niagara Falls		Oshkosh
Rochester	PENNSYLVANIA	Superior
Saugerties	Philadelphia	West Allis
Schenectady	Pittsburgh	
Watertown	Reading	

2. Among the cities reported by the National Board of Censorship of Motion Pictures as using films in the public schools are Bakersville, California; Boston; Buffalo; Dennison, Texas; Denver; Fitchburg; Houston; Ithaca; Lincoln; Maspeth, Long Island; Minneapolis; New Rochelle; New York; Omaha; Paducah; Pasadena; Paterson; Providence; Pueblo; St. Paul; Troy; Zanesville, Ohio. They are in use in the social centres of Cincinnati, Cleveland, Minneapolis, New Rochelle, St. Louis, and South Bend.

3. The National Board of Censorship of Motion Pictures also reports that Boston, Cincinnati, Denver and New Orleans make use of motion pictures in their parks and playgrounds.

CHAPTER XVI

PUBLIC RECREATION

1. *Wider Use of School Plant, New York City**Special Activities**Aggregate Attendance 1913-1914*

Recreation Centres	2,569,303
Vacation Playgrounds	6,155,182

SOCIAL AND RECREATION CENTRES		PLAYGROUNDS		
Educative	Recreative	Vacation Playgrounds	Mothers and Babies Playgrounds	Evening Play-grounds
Study Room	Gymnasium	Assembly	Assembly	Band
Quiet Games	Athletics	Swings	Swings	Concert
Library	Basket Ball	Seesaw	Ring Games	Dancing
Magazines	Civil Service	Sand Play	Sand Play	Games
Singing	Hand Ball	Occupation	Raffia	Singing
Music	Base Ball	Story Telling	Folding	Baths
Civil Service	Baths	Clubs	Cutting	
Clubs	Social Dancing	Games	Sewing	
Literary	Folk Dancing	Library	Games	
Debating	Parties	Raffia	Baths	
Dramatic	Tournaments	Athletics		
Social	Entertainments	Gymnastics		
Athletic	Contests	Baths		
Parents	Drills			
Boy Scouts				
Camp Fire Girls				

2. *South Park Commissioners, Chicago**Application for Use of Halls and Club Rooms**Conditions*

Your reservation is not secure until you receive a reservation card. If you do not receive a reservation card within a few days after your request is filed, write or telephone the office of the South Park Commissioners.

The halls and club rooms are for the free use of the public for all moral purposes except political and religious meetings. Political or religious propaganda work will not be permitted in any park.

Groups and individuals using the halls and club rooms must refrain from

advertising their business, school, studio, society, association, or institution by verbal or printed announcements, or by any other direct or indirect method.

No group or individual will be permitted to charge admission, charge wardrobe fee, sell tickets, or solicit money in any manner at any function held in any part of the building or park.

Dignified and responsible chaperones must accompany all groups of boys and girls under 16 years of age.

Doorkeepers, wardrobe attendants, floor manager and other necessary aids must be supplied by each group using the halls for dances.

Suggestive or improper dancing will not be tolerated. The Field House Director will be the ultimate authority as to what is improper.

Smoking, card playing or gambling of any nature will not be tolerated in any part of the park buildings.

Violation of any of the conditions stated above will result in depriving the group or individuals involved of further use of the Field House facilities.

Club rooms may be engaged not more than three months in advance.

Assembly halls may be engaged not more than two months in advance.

**Applicant Retain this Slip
(See other side)**

.....
Applicant give this slip to the Field House Director, or mail the same to the South Park Commissioners, Fifty-seventh Street and Cottage Grove Avenue.

Date.....

To the South Park Commissioners:

I hereby make application for the use of the.....
Name of hall

in.....
Write name of Park

on.....
Give day, date, month or months and time
for the purpose of holding.....
Name kind of use

I represent.....
Give name of group or institution. If not an organized group write "Unorganized Group."

The group will consist of.....
Give exact number as nearly as possible and state average age.
The name of the chaperone or leader who will be present is.....

.....
(Name, Address and Phone Number)
The name of the person to whom the reservation card should be sent is

.....
(Name, Address and Phone Number)

In signing the above I acknowledge that I have read the conditions of reservation and that the group for whom I wish a reservation will observe all conditions set forth herein, or any conditions imposed by the Field House Director during the use of the building.

Signed.....
Address.....

3. A comparison of the patronage and cost of maintenance of the bath-houses of Milwaukee and Brookline may throw some light on the advisability of maintaining free public baths. In 1900, 215,000 baths were furnished at the West Side Natatorium in Milwaukee at a cost to the city of \$4755, or including interest on the plant, \$5595; at the South Side Natatorium there were 212,000 baths taken, costing the city, including interest, \$5270, in each case an expense of about 2½ cents a bather. In the same year it cost the city of Brookline \$7600 to provide 50,000 baths, and there was received in fees the amount of \$5233.50, leaving a deficit of \$2366.50, thus making a cost to the city of nearly five cents a bather. It would appear that it costs the city only half as much per bather in Milwaukee to provide free baths, as it does in Brookline to provide baths for fees. It costs the city of New York twelve cents per bather with the 1913 patronage of its public natatoriums, but when they are used to their maximum capacity, it will reduce the cost to about that of Milwaukee.

4.

Notable Civic Pageants

The American Pageant Association lists the Pageant of Education, which occurred in Boston in 1908, as the first American performance properly to be regarded as a pageant.

In 1909 — Duxbury Days, An Historical Pageant, Duxbury (Mass.). The true spirit of pageantry was incorporated in this performance, which was probably the first presentation of the history of the growth and development of a locality given outdoors in New England.

Pageant of Illinois, Evanston (Ill.).

In 1910 — MacDowell Memorial Pageant, Peterboro (N. H.), combined the historical incidents of Peterboro with a sequence of scenes developed from the musical compositions of Edward MacDowell, in whose memory the performance was given. It is notable as the first American pageant to treat music seriously as a creative factor in the making of a pageant.

Pageant of the Perfect City, Boston. (1915 Civic Pageant.) A notable pageant, belonging to the group of pageants of an idea, or social pageants, — its principal purpose being to arouse civic interest in the progress and future development of the community.

Old Worcester Ways, An Historical Pageant, Worcester (Mass.).

Historical Pageant, Charlestown (Mass.).

The Ripon Historical Pageant, Ripon (Wia.).

Pageant of Old Deerfield, Deerfield (Mass.).

Pageant of Ipswich, Ipswich (Mass.).

In 1911 — Pageant of the History of Minnesota, St. Paul.

Historical Pageant of Northampton, Northampton (Mass.).

Pageant of New London, New London (Conn.).

Pageant of the Old Northwest, Milwaukee.

Pageant of Patriotism, Taunton (Mass.).

Pageant of Hartford, Hartford (Vt.).

Pageant of Martha's Vineyard, West Tisbury (Mass.).

Pageant of Bennington, Bennington (Vt.).

A Pageant for Independence Day, Chicago.

In 1912—Historical Pageant, Philadelphia. One of the three largest American pageants. Over 6000 people took part. The motive was distinctly historical, and the dramatization consequently literally historical and realistic, and not symbolically interpretive. Peculiarly of the English type. Magnificent as a spectacle on its enormous but ideal grounds in Fairmount Park. Unequaled for historical accuracy in all details of costumes and properties.

Erasmus Hall High School, Brooklyn. Done by the teachers and pupils of the school in the courtyard of the new buildings on the occasion of their completion. Dealt with the history of Brooklyn, particularly as it centered in this school.

In 1913—The Arlington Pageant, Arlington (Mass.).

The Weston Pageant, Weston (Mass.).

Pageant of Meriden, Meriden (N. H.).

The Pageant of Portland, Portland (Me.).

The Medway Pageant, Medway (Mass.).

The Pageant of Wheeling, Wheeling (W. Va.).

Pageant of Oxford, Oxford (Mass.).

Pageant of Healdsburg, Healdsburg (Cal.).

Pageant at Peoria, Peoria (Ill.).

In 1914—The Pageant of Concord, Concord (N. H.).

Pageant of New Harmony, New Harmony (Ind.).

The Pageant of Littleton, Littleton (Mass.).

Pageant of Rutland (200th Anniversary), Rutland (Mass.).

The Chatham Pageant, Chatham (N. Y.).

The Pageant of Warren (R. I.).

The Pageant of Elizabeth (N. J.).

The Pageant of St. Louis.

A complete list of American pageants may be obtained from the American Pageant Association, President, Frank Chouteau Brown, Ticknor House, Boston.

CHAPTER XVII

CITY PLANNING

1. The site of the Grover Cleveland High School, St. Louis, is at once commanding and generous. It is divided by a cross street into two portions, one of which on the higher level contains the school building, which from its high position commands a view of the athletic field, lying immediately between it and Grand Avenue Boulevard. The field furnishes a quarter of a mile running track, regular football and baseball fields, and gives opportunity for the introduction of all athletic sports, including tennis and basketball. The stadium will seat 5500 persons and provides locker and toilet facilities for the general public, as well as for those taking part in the athletic events.

The building contains a swimming pool and a music and lecture room seating 300 besides an auditorium. The manual training shops are located in the rear of the building in a well-lighted one-story annex. The school is equipped with a vacuum cleaning system, is wired and fitted complete with lighting fixtures, individual lighting being carried to the pupils' tables in the laboratories and mechanical drawing rooms. There is a synchronizing clock and bell system, a house telephone system with switchboard in the general office, a refrigerating plant to serve the lunch room, and drinking fountains throughout the building. The building will cost, ready for its fixed equipment, \$666,000 or 17.7 cents per cubic foot. The stadium, plans for which are just completed, is estimated to cost \$70,000.

BIBLIOGRAPHY

Prepared by HELEN BERNICE SWEENEY

CHAPTER I

THE CONSERVATION OF THE CITY

Munro, William Bennett. *A Bibliography of Municipal Government in the United States*. Harvard University Press, Cambridge. 1915.

General Statistics of Cities: 1909. Department of Commerce: Bureau of the Census. Government Printing Office, Washington.

Financial Statistics of Cities having a Population of over 30,000: 1912. Department of Commerce: Bureau of the Census. Government Printing Office, Washington. 1914.

Bartlett, Dana W. *The Better City*. Neuner, Los Angeles. 1907.

Wilcox, Delos F. *The American City: a Problem in Democracy*. Macmillan, New York. 1904.

Wilcox, Delos F. *Great Cities in America: Their Problems and Their Government*. Macmillan, New York. 1910.

Johnson, Tom Loftin. *My Story*. Edited by Elizabeth J. Hauser. Huebsch, New York. 1911.

Howe, Frederic C. *The City, the Hope of Democracy*. Scribner's, New York. 1905.

Howe, Frederic C. *The Modern City and Its Problems*. Scribner's, New York. 1915.

Pollock, Horatio M., and Morgan, William S. *Modern Cities*. Funk and Wagnalls, New York. 1913.

Taylor, Graham Romeyn. *Satellite Cities*. Appleton, New York. 1915.

Lindsey, Benjamin Barr, and O'Higgins, Harvey Jerrold. *The Beast*. Doubleday, New York. 1910.

Hungerford, Edward. *The Personality of American Cities*. McBride, Nast, New York. 1913.

Beard, Mary Ritter. *Women's Work in Municipalities*. Appleton, New York. 1915.

American City Bureau. *Selected list of municipal and civic books*. New York, 1913.

The list is brought down to date in each issue of the *American City*.

American Year Book. 1914. Edited by Francis G. Wickware. Appleton, New York. 1915.

McLaughlin, A. C., and Hart, A. B., eds. *Cyclopedia of American Government*. 3 vols. New York, 1914.

Municipal Journal. *Municipal Index*, in which are listed and classified

all articles treating of municipal topics appearing in the leading periodicals. New York.

The index is published monthly. It has been issued since 1907.

Engineering Index. Bibliography of municipal government. Compiled from the Engineering Index.

Published monthly in the *Engineering Magazine* since 1906.

The National Municipal Review.

The Annals of the American Academy of Political and Social Science.

The American City.

American Economic Review.

The Survey.

Municipal Engineering.

Municipal Journal.

Engineering Magazine.

The American Architect.

La Follette's Magazine.

The Christian Science Monitor, daily, Boston, has fuller and more accurate civic news than any other American newspaper.

CHAPTER II

THE CITY PORTAL

(Terminals)

Richardson, W. Symmes. The Terminal — The Gate of the City. *Scribner's Mag.*, October, 1912.

Dunn, Samuel O. The Problem of the Modern Terminal. *Scribner's Mag.*, October, 1912.

Arnold, Bion Joseph. Report on the Rearrangement and Development of the Steam Railroad Terminals of the City of Chicago. Submitted to the Citizens' Terminal Plan Committee of Chicago. November 18, 1913.

Wallace, John F. Report to the Committee on Railway Terminals of the City Council of Chicago. October 20, 1913.

The Railway Terminal Problem of Chicago: A Series of Addresses before the City Club dealing with the Problem of Reorganizing Chicago's Railway Terminals. Published by the City Club of Chicago. September, 1913.

Fisher, W. L., and Arnold, Bion J. Report to the Citizens' Terminal Plan Committee of Chicago. 1914.

Arnold, Bion Joseph. Report on the Improvement and Development of the Transportation Facilities of San Francisco. Submitted to the Mayor and the Board of Supervisors, City of San Francisco. March, 1913.

Monumental Gateway to a Great City: Completing the Grand Central Terminal, New York. *Scientific American*, December 7, 1912.

Van Norman, L. E. Achievement of the Hudson Tunnels. *Review of Reviews*, April, 1908.

(Concrete Viaducts)

Noyes, E. N. Construction of the Concrete Viaduct between Dallas and Oak Cliff, Texas. *Engineering Record*, November 9, 1912.

The (Galveston) Causeway Bill. *The Galveston Daily News*, May 25, 1912.

Mowry, Duane. Milwaukee's Concrete Viaduct. *Municipal Journal*, October 31, 1912.

Reinforced Concrete Arches in Pittsburgh. *Municipal Engineering*, March, 1913.

Penn Street Viaduct at Reading, Pennsylvania. *Engineering Record*, November 30, 1912.

Galveston's New Link with Texas. *Harper's Weekly*, June 15, 1912.

Tyrrell, Henry Grattan. Concrete Bridges and Culverts for Both Railroads and Highways. M. C. Clark, Chicago. 1909.

(Bridges)

Tyrrell, Henry Grattan. The Esthetic Treatment of City Bridges. Reprinted from *American City*. No. 101.

Tyrrell, Henry Grattan. Artistic Bridge Design. M. C. Clark, Chicago. 1912.

The City's Giant Bridges. *Scientific American*, December 5, 1908.

Thompson, T. Kennard. The Bridges of New York City. *Engineering Mag.*, September and October, 1909.

Schuyler, Montgomery. Our Four Big Bridges. *Architectural Record*, March, 1909.

Koester, Frank. Bridges and Bridge Approaches. *American City*, May, 1913.

(Waterfront)

Ramage, B. J. The Reconstruction of American Ports. *Review of Reviews*, April, 1914.

National Rivers and Harbors Congress. Proceedings. 1911.

White, Frank G. Port Improvements at San Francisco. *Engineering Record*, July 12, 1913.

Dodge, Louis A. The Public Belt Railroad of New Orleans. *American City*, December, 1911.

Covering a City's Front with Docks, Tracks and Parks. *Scientific American*, May 6, 1911.

(Harbor Improvements)

Ramage, B. J. The Reconstruction of American Ports. *Review of Reviews*, April, 1914.

Chicago River and Harbor Association. River Bulletin No. 1. May, 1909.

Seattle and Puget Sound Harbor Improvements. *Scientific American*, October 19, 1912.

Port of Seattle Commission. Reports. 1912 to date.

Koester, Frank. *Modern City Planning and Maintenance*. McBride, Nast and Co., New York. 1914.

Baltimore: Port and Terminal Advantages. *Municipal Journal* (Baltimore), April 9, 1915.

River Traffic Terminals for Davenport, Iowa. *The Christian Science Monitor*, December 31, 1914.

Atlantic Deeper Waterways Association. Bulletins.

Farbar, Jerome H. The Houston Chamber of Commerce ("Houston Ship Channel"). *National Municipal Review*, January, 1913.

Great Gains in a Year for Boston. Bulletin of the Atlantic Deeper Waterways Association, January, 1914.

Sikes, G. C. Survey of American Dock Development. Third National Conference on City Planning. Proceedings. 1911.

Department of Docks and Ferries. Reports. New York, 1910-1912.

(Track Elevation)

New York State. Public Service Commission. First District. Review of grade crossing elimination, digest and bibliography. Report to Commissioner, Edward M. Bassett, by Robert H. Whitten, librarian-statistician. New York, 1910.

St. Louis. Public Library. Grade Crossing Elimination in American Cities. Bibliography and digest of reports from cities. Monthly Bulletin, news series, July, 1913.

Grade Separation at Grand Crossing, Chicago. *Railway Age Gazette*, May 3, 1912.

Lachey, W. S. The Track Elevation Subways in Chicago. *Railway Age Gazette*, March 6, 1914.

Elimination of Crossings Long Chicago Task. *The Christian Science Monitor*, November 30, 1914.

Department of Track Elevation, Chicago. In Mayor Harrison's Report. May 18, 1914.

Abolishment of Grade Crossings. Annual Report of the Bureau of Surveys of the City of Philadelphia for the year 1913.

Wagner, Samuel Tobias. The Elevation of the Tracks of the Philadelphia, Germantown and Norristown Railroad, Philadelphia, Pa. American Society of Civil Engineers. Transactions. Paper No. 1275. (1913.)

CHAPTER III

MUNICIPAL RAILWAY REGULATION

(General)

Houston, E. J., and Kennelly, A. E. *Electric Street Railways*. New York, 1906.

Johnson, E. R. Public Regulation of Street Railway Transportation. *The Annals*, March, 1907.

Electric Railway Transportation. *The Annals*, January, 1911.

A Study of Rapid Transit in Seven Cities. Municipal Reference Library, Chicago. Mun. Ref. Bulletin No. 3. July, 1914.

Wilcox, Delos Franklin. Street Railway Re-Settlements and Negotiations for Municipal Ownership. *National Municipal Review*, October, 1914.

(*Jitneys*)

The Jitney in Many Cities. *Municipal Journal*, February 18, 1915.

State Legislation and the Jitney. *Municipal Journal*, May 20, 1915.

King, Clyde Lyndon. The Jitney Bus. *American City*, June, 1915.

(*Volume of Urban Transportation*)

Street and Electric Railways, 1907. Bureau of the Census. Special Report. 1910.

Census Statistics of the Street Railway Industry. *Scientific American Supplement*, May 8, 1909.

Snyder, George Duncan. City Passenger Transportation in the United States. *Scientific American Supplement*, March 29, 1913.

Central Electric Light and Power Stations and Street and Electric Railways, 1912. Bureau of the Census, Bulletin 124. 1914.

Ten Years of the New York Subway. *Municipal Journal*, November 19, 1914.

(*Rapid Transit: Boston*)

Beal, B. L. Boston Municipal Subway. *Municipal Affairs*, March, 1900.

Winslow, Willard. Boston's New Subway. *Municipal Affairs*, June, 1901.

Brandeis, Louis D. The Experience of Massachusetts in Street Railways. *Municipal Affairs*, Winter, 1902-1903.

Municipal Ownership and Municipal Franchises. *The Annals*, January, 1906.

Pinanski, Abraham E. Boston's Street Railways. *National Municipal Review*, April, 1912.

Boston Transit Commission. Reports.

Boston Elevated Railway Company. Reports.

(*Rapid Transit: New York*)

Tunnels and Subways. *Scientific American*, December 5, 1908.

Martin, John. Rapid Transit: Its Effect on Rents and Living Conditions and How to Get It. Published and sold by the Committee on Congestion of Population, New York. March, 1909.

A Great Rapid Transit System for a Great City: Doubling the Capacity of New York's Subways and Elevated Roads. *Scientific American*, December 17, 1910.

New York State. Public Service Commission, first district. Dual System of Rapid Transit for New York City. September, 1912.

Lavia, F. New York Rapid Transit Railway Extensions. A series of articles. History of rapid transit development in New York, especially evolution of systems now under construction. *Engineering News*, October 1-15, 1914.

Wilcox, Delos Franklin. The New York Subway Contracts. *National Municipal Review*, July, 1913.

Gilbert, G. H., Wightman, L. I., and Saunders, W. L. The Subways and Tunnels of New York; Methods and Costs; with an Appendix on tunneling machinery and methods, and tables of engineering data. New York, 1912.

(*Chicago's Freight Tunnels*)

Chicago's Sixty Miles of Freight Subway. *Scientific American*, December 11, 1909.

(*Chicago's Street Railway*)

Hotchkiss, Willard E. Chicago Traction: A Study in Political Evolution. *The Annals*, November, 1906.

Hotchkiss, Willard E. Recent Phases of Chicago's Transportation Problem. *The Annals*, May, 1908.

Chicago. Joint Report on Comprehensive System of Passenger Subways for the City of Chicago by the Harbor and Subway Commission and Sub-committee of the Council Committee on Local Transportation. September 10, 1912.

Wilcox, Delos Franklin. How the Chicago and Cleveland Street Railway Settlements are Working Out. *National Municipal Review*, October, 1912.

Chicago. Street Railways: Proceedings before Committee on Local Transportation in Re-investigation of Board of Supervising Engineers. June, 1914.

Hooker, George E. Through Routes for Chicago's Steam Railroads. Published by the City Club of Chicago. 1914.

Wilcox, Delos Franklin. Great Cities in America. Macmillan, New York. 1910.

Heilman, R. E. Chicago Traction; a study of the efforts of the public to secure good service. *American Economic Association Quarterly*, July, 1908.

(*Rapid Transit: Philadelphia*)

McLain, F. D. The Street Railways of Philadelphia. *Quarterly Journal of Economics*, February, 1908.

Lewis, Edwin O. Philadelphia's Relation to Rapid Transit Company. *The Annals*, May, 1908.

Report of the Transit Commissioner, City of Philadelphia. 2 vols. July, 1913.

Rapid Transit Development with Universal Free Transfers. Reply of the Department of City Transit to Proposals of March 25, 1914, by

the Philadelphia Rapid Transit Company. Philadelphia, April 7, 1914.

Financial Aspects of the Program for Rapid Transit Development with Universal Free Transfers. Submitted for Consideration. Statement made by Director of the Department of City Transit, Philadelphia. June 2, 1914.

Taylor, A. Merritt. Philadelphia's Transit Problem. *The Annals*, January, 1915.

(*Street Railways: Detroit*)

Bemis, Edward W. Detroit's Efforts to Own Her Street Railways. *Municipal Affairs*, September, 1899.

Wilcox, Delos Franklin. The Control of Public Service Corporations in Detroit. *The Annals*, May, 1908.

Detroit's Railroads may become Municipal. *Municipal Record* (San Francisco), March 25, 1915.

(*Street Railways: Cleveland*)

Bemis, Edward W. The Franchise Situation in Cleveland. *Municipal Affairs*, June, 1902.

Hayden, Warren S. The Street Railway Situation in Cleveland. Conference for Good City Government. Proceedings. Cincinnati, 1909.

Bemis, Edward W. Cleveland Street Railway Settlement. *Quarterly Journal of Economics*, May, 1910.

Sidlo, T. L. Cleveland Invalidity Clause: A New Development in Public-Utilities Ordinances. *Journal of Political Economy*, February, 1911.

Wilcox, Delos Franklin. How the Chicago and Cleveland Street Railway Settlements are Working Out. *National Municipal Review*, October, 1912.

Johnson, Tom Loftin. My Story. Edited by Elizabeth J. Hauser. Huebsch, New York. 1911.

Three Years of Cleveland Street Railway Plan. *American City*, September, 1913.

(*Street Railways: San Francisco*)

Arnold, Bion Joseph. Report on the Improvement and Development of the Transportation Facilities of San Francisco. Submitted to the Mayor and the Board of Supervisors, City of San Francisco. March, 1913.

Harrison, Walter M. San Francisco's Municipal Street Railway. *American City*, February, 1913.

San Francisco Municipal Railway: Official Statement of the Cost of Construction and the Operation. *Electric Railway Journal*, October 11, 1913.

San Francisco's First Tunnel Successfully Completed and in Use. *Municipal Record* (San Francisco), December 31, 1914.

Report of the Municipal Railways of San Francisco for the year ending December 31, 1914.

Technical Description of Twin Peaks Tunnel. *Municipal Record* (San Francisco), January 14, 1915.

CHAPTER IV

THE CITY STREET

(General)

Maxwell, W. H., and Brown, J. T. *The Encyclopaedia of Municipal and Sanitary Engineering*. New York, 1910.

Whinery, S. *Municipal Public Works: Their Inception, Construction and Management*. Macmillan, New York, 1903.

Baker, M. N. *Municipal Engineering and Sanitation*. Macmillan, 1902.

(Paving)

Municipal Paving: A Symposium. *The Annals*, May, 1907.

General Statistics of Cities: 1909. Department of Commerce: Bureau of the Census. Special Report.

Tillson, George William. *Street Pavements and Paving Materials*. 2d ed. Wiley, New York, 1912.

Tillson, George William. *Street Pavements—Their Selection, Care and Maintenance*. *American City*, December, 1912.

Lewis, Nelson P. Need of a Systematic Paving Program. *American City*, July, 1913.

Gaynor, K. C. Concrete Paving. *American Municipalities*, April, 1913.

The Street Paving Problem of Chicago: A Report to the Street Paving Committee of the Commercial Club by John W. Alvord. 1904.

Galligan, W. J. Municipal Street Repairing in Chicago. *Municipal Journal*, August 6, 1914.

New York City. Report of the Mayor's Committee on Pavements. Appointed in October, 1911, to investigate and report on the present condition of the pavements of the city and how they can best be improved. March, 1912.

Blachly, Frederick F. The Streets of New York City. *National Municipal Review*, October, 1913.

Street Paving Statistics: Official figures from about 700 cities; amount of paving done in 1913; amount contemplated for 1914; etc. *Municipal Journal*, March 5, 1914.

Dutton, Ellis R. Creosoted Wood Block Pavement Laid by City Day Labor in Minneapolis. *Engineering News*, January 2, 1913.

Hubbard, Prevost. *Dust Preventives and Road Binders*. New York, 1910.

Frost, Harwood. *The Art of Roadmaking, Treating of the Various Problems and Operations in the Construction and Maintenance of Roads, Streets, and Pavements*. New York, 1910.

(Pavement Openings)

Barlow, James E. Openings in Street Pavements. *American City*, January, 1913.

Bolling, C. E. Installing Underground Pipe Connections before Paving Roads. *American City*, February, 1912.

Webster, George S. Subterranean Street Planning. *The Annals*, January, 1914.

(Conduits)

Ford, Frederick L. The Removal of Overhead Wires. American Civic Association. Leaflet No. 13. March, 1907.

Myers, Gustavus. History of Public Franchises in New York City: Conduits and Subways. *Municipal Affairs*, March, 1900.

Department of Commerce: Bureau of the Census. Special Report. General Statistics of Cities: 1909.

Department of Commerce: Bureau of the Census. Special Report. Financial Statistics of Cities: 1911.

Annual Report of the Commissioners of the District of Columbia. Vol. II. 1913.

Department of Gas and Electricity of the City of Chicago. Annual Report. 1913.

Baltimore's Municipal Conduit System. *Municipal Journal* (Baltimore), March 19, 1915.

Dumond, Lewis A. Pipe Subways for the Public Utilities of Chicago. Abstract of a report. *Engineering Record*, December 26, 1914.

(Municipal Lighting)

Department of Commerce: Bureau of the Census. Special Report. Central Electric Light and Power Stations and Street and Electric Railways: 1912.

Report of the Committee on Gas, Oil and Electric Light to the City Council of Chicago. January 29, 1906.

Rowe, L. S. The Municipality and the Gas Supply, as Illustrated by the Experience of Philadelphia. *The Annals*, May, 1898.

Grant, Arthur Hastings, comp. A List of Defunct Municipal Lighting Plants. 2d and enl. ed. M. O. Publishing Bureau, New York. 1908.

Ford, A. H. Street Lighting. Bulletin of the State University of Iowa. No. 1.

Palmer, Ray. Street Lighting Rates and Cost Factors. *American City*, December, 1914.

Palmer, Ray. Municipal Lighting Rates. *The Annals*, January, 1915.

Annual Report of the Electrical Bureau of the City of Philadelphia for the year ending December 31, 1913. A Summary.

Annual Report of the Director of Public Works and of the Bureau of Lighting for the year ending December 31, 1912. Philadelphia, 1913.

Annual Report of the Bureau of Lighting of the City of Philadelphia for the year ending December 31, 1913.

Annual Reports of the Water and Light Department of the City of Duluth. Hopwood, E. C. The Baker Administration of Cleveland. *National Municipal Review*, July, 1913.

Annual Reports of the Department of Gas and Electricity, City of Chicago. Winchester, Albert E. South Norwalk's Municipal Electric Works. *The Annals*, January, 1915.

Koiner, C. Wellington. Pasadena's Municipal Light and Power Plant. *The Annals*, January, 1915.

Cleveland's New Municipal Electric Plant: Selling Electricity at a Three-Cent Maximum Rate. *Engineering News*, July 30, 1914.

Hatch, William B. A Successful Fight for a Municipal Gas Plant. *American City*, January, 1915.

Municipal Journal. Lighting Number. August 27, 1914.

Municipal Lighting Department Reports of Cleveland, Detroit, Holyoke, Jacksonville (Fla.), Los Angeles, Pasadena, Richmond (Va.), Seattle, South Norwalk and Tacoma.

(*Ornamental Lighting*)

Kaempfert, Waldemar. Ornamental Street Lighting. National Electric Light Association. 1912.

Allen, Walter C. A Notable Development in Ornamental Street Lighting. *American City* Pamphlet No. 109.

Bright, Alan. Ornamental Street Lighting with Gas. *American City*, March, 1913.

Koiner, C. W. Street Lighting in Pasadena. *American City*, January, 1913.

Lacombe, C. F. Street Lighting Systems and Fixtures in New York City. *American City*, May, 1913.

Paying for Display Lighting. *Municipal Record* (San Francisco), January 7, 1915.

CHAPTER V

THE CITY'S WASTES

(*Street Cleaning*)

Soper, George Albert. Modern Methods of Street Cleaning. *Engineering News*, New York. 1909.

General Statistics of Cities: 1909. Department of Commerce: Bureau of the Census. Special Report.

Very, E. D. Modern Methods of Street Cleaning. *American City*, November, 1912.

Aronovici, Carol. Municipal Street Cleaning and Its Problems. *National Municipal Review*, April, 1912.

Paxton, J. W. Washington (D. C.) Street Cleaning Methods. A series of articles. *Engineering News*, August-October, 1914.

Street Cleaning Data. *Municipal Journal*, January 14, 1915.

Fineman Thomas. The Comparative Cost of Sweeping Pavements by

Horse-Drawn Sweepers and by Motor Sweepers. *American City*, February, 1915.

Care of Streets in Chicago. *Engineering Record*, November 15, 1913.

New York City. Public Library. List of Works Relating to City Wastes and Street Hygiene. Bulletin, October, 1912.

(Waste Collection)

General Statistics of Cities: 1909. Department of Commerce: Bureau of the Census. Special Report.

Practical Aspects of the City Waste Problem: Norton, George H., Recoverable Values of Municipal Waste; Whinery, S., Street Litter and Street Sweepings; Morse, W. F., The Collection of Municipal Waste. *American City*, October, 1913.

Municipal Collection of Ashes. *Municipal Journal*, June 11, 1914.

Morse, William F. The Collection and Disposal of Municipal Waste. *Municipal Journal and Engineer*, New York. 1908.

(Waste Disposal)

Soper, George A. A City Plan for Waste Disposal. *The Annals*, January, 1914.

General Statistics of Cities: 1909. Department of Commerce: Bureau of the Census. Special Report.

Hering, Rudolph. Disposal of City Refuse. *Transactions of the Fifteenth International Congress on Hygiene and Demography*, Washington, 1912. Government Printing Office, Washington. 1913.

Schneider, Franz, Jr. The Disposal of a City's Waste. *Scientific American*, July 13, 1912.

Changing Garbage Disposal from an Expense to a Revenue. *American City*, September, 1913.

Parsons, H. deB. The Disposal of Municipal Refuse. New York, 1906.

Utilizing Incinerator Heat. *Municipal Journal*, June 11, 1914.

Chicago's Struggle for Scientific Garbage Collection and Disposal. *The Survey*, March 21, 1914.

Report of the City Waste Commission of the City of Chicago. Chicago, 1914.

Department of Public Service: Garbage Disposal Division, City of Cleveland. Annual Reports.

The March of the Cities: Seattle Making a Profit from the Disposal of Garbage. *The World's Work*, August, 1914.

Recent Refuse Disposal Practice. *Municipal Journal*, December 10, 1914.

The Disposal of Waste in Philadelphia. *National Municipal Review*, April, 1914. Notes and Events.

Greeley, Samuel A. Refuse Disposal in Small Cities and Towns. *American City* Pamphlet No. 103.

Morse, William F. The Collection and Disposal of Municipal Waste. *Municipal Journal and Engineer*, New York. 1908.

Results of Garbage Reduction at Columbus, Ohio. *Municipal Engineering*, October, 1913.
Venable, W. M. *Garbage Crematories in America*. New York, 1906.

(Snow Removal)

Fetherston, John T. Clearing Streets of a Snowbound City. *Engineering Record*, March 28, 1914.
Steele, George D. Snow Removal in Our Leading Cities. *Better Roads and Streets*, February, 1915.
Rourke, L. K. Methods of Handling Snow in Boston, Massachusetts. *Engineering and Contracting*, May 13, 1914.

(Smoke)

The Smoke Nuisance. Report of the Smoke Abatement Committee of the Civic League of St. Louis. November, 1906.
Atkinson, A. S. Smokeless Cities of the Future. *The Technical World Mag.*, June, 1907.
The Smoke Nuisance. American Civic Association. 2d ed. Washington, 1911. (Bibliography.)
United States. Bureau of Mines. Bulletin No. 39. The Smoke Problem at Boiler Plants, a preliminary report by D. T. Randall. Reprint of United States Geological Survey Bulletin 334, revised by S. B. Flagg. Washington, 1912.
United States. Bureau of Mines. Bulletin No. 40. The Smokeless Combustion of Coal in Boiler Furnaces, by D. T. Randall and H. W. Weeks. Reprint of United States Geological Survey Bulletin 373, revised by Harry Kreisinger. Washington, 1912.
Flagg, Samuel B. City Smoke Ordinances and Smoke Abatement. United States. Bureau of Mines. Bulletin 49. 1912.
University of Pittsburgh: Department of Industrial Research. Outline of the Smoke Investigation. Bulletin No. 1. August, 1912.
University of Pittsburgh: Mellon Institute of Industrial Research and School of Specific Industries. Bibliography of Smoke and Smoke Prevention, by Ellwood H. McClelland, *comp.* Bulletin No. 2. 1913.
University of Pittsburgh: Mellon Institute of Industrial Research and School of Specific Industries. Psychological Aspects of the Problem of Atmospheric Smoke Pollution, by J. E. Wallace Wallin. Bulletin No. 3. 1913.
University of Pittsburgh: Mellon Institute of Industrial Research and School of Specific Industries. The Economic Cost of the Smoke Nuisance to Pittsburgh, by John J. O'Connor. Bulletin No. 4. 1913.
University of Pittsburgh: Mellon Institute of Industrial Research and School of Specific Industries. The Meteorological Aspect of the Smoke Problem, by Herbert H. Kimball. Bulletin No. 5. 1913.
University of Pittsburgh: Mellon Institute of Industrial Research and School of Specific Industries. Papers on the Effect of Smoke on Building Materials, by Raymond C. Benner. Bulletin No. 6. 1913.

University of Pittsburgh: Mellon Institute of Industrial Research and Specific Industries. The Effect of the Soot in Smoke on Vegetation, by J. F. Clevenger. Bulletin No. 7. 1913.

University of Pittsburgh: Mellon Institute of Industrial Research and Specific Industries. Some Engineering Phases of Pittsburgh's Smoke Problem. Bulletin No. 8. 1914.

University of Pittsburgh: Mellon Institute of Industrial Research and Specific Industries. Papers on the Influence of Smoke on Health, by Oskar Klotz and William Charles White. Bulletin No. 9. 1914.

Department of Smoke Inspection, City of Chicago. Bulletin No. 1, February, 1908. Contains the "Ordinance Providing for Smoke Inspection and Abatement in the City of Chicago."

Department of Smoke Inspection, City of Chicago. Report. February, 1911.

Cleveland, Ohio. Chamber of Commerce. Report of the Committee on Smoke Prevention. March 11, 1914.

Pittsburgh, Pennsylvania. An ordinance regulating the production or emission of smoke . . . within the corporate limits of the City of Pittsburgh. (Bill 1329.)

Zellner, Karl J. The Smoke Nuisance. *National Municipal Review*, January, 1915.

Olmsted, Frederick L., and Kelsey, Harlan P. The Smoke Nuisance. American Civic Association. Series 11, No. 1. March, 1908.

CHAPTER VI

WATER AND SEWERAGE

(The Conservation of Water)

Fuertes, J. H. Waste of Water in New York and Its Reduction by Meters and Inspection. New York, 1906.

Hansen, Paul. Increasing the Efficiency of Small Water Works and Sewage Treatment Plants. 1913. Reprinted from the annual proceedings of the Illinois Society of Engineers and Surveyors.

Fuller, George W. The Efficient Utilization of Water Storage Reservoirs. *American City* Pamphlet No. 107.

Water Consumption of Cities. The Effect of Meters on Water Consumption. *American City* Pamphlet No. 98.

Dunlap, John H. Water Works Statistics of Thirty-eight Cities of Iowa, with the Meter Rates of Seventy Cities. Bulletin of the State University of Iowa. 1914.

Water Works Statistics. Figures furnished by the superintendents of 500 water works plants, both municipal and private—consumption, meters, distribution system, purification methods. *Municipal Journal*, May 7, 1914.

Water Works Statistics. Figures furnished by the superintendents of 78 additional plants since May 7. *Municipal Journal*, June 25, 1914.

The Seattle Municipal Water Plant; historical, descriptive, statistical. Written by John Lamb, chief clerk and auditor, January 1, 1914.

Turneaure, F. E., and Russell, H. L. Public Water Supplies. 2d ed. New York, 1913.

Hazen, Allen. Clean Water and How to Get It. 2d ed. Rev. and enl. Wiley, New York. 1914.

Baker, M. N., ed. Manual of American Waterworks. 4th issue. New York, 1897.

(*Los Angeles Water Supply*)

Heinly, Burt A. Los Angeles—A City in Business. *National Municipal Review*, January, 1914.

Brennecke, Olga. How Los Angeles Built the Greatest Aqueduct in the World. *Craftsman*, November, 1912.

(*New York City Water Supply*)

White, Lazarus. The Catskill Water Supply of New York City. New York, 1913.

Weems, Carrington. Task Greater than Panama Canal. *The Evening Post* (New York), January 17, 1914.

Taylor, William T. Greater New York's Water Supply Scheme. *Surveyor*, May 15, 1914.

(*Boston Water Supply*)

Metropolitan Water and Sewerage Board. Annual Reports.

(*Filtration*)

The Purification of Municipal Water Supplies. An address delivered by the Chemist of the Sanitary District of Chicago before the Lake Michigan Water Commission, Milwaukee, September 10, 1908.

Water Filtration at Pittsburgh. *Municipal Journal and Engineer*, November 11, 1908.

Cincinnati's Water Filtration Plant. *Municipal Journal and Engineer*, November 4, 1908.

Water Filters of Providence, R. I. *Municipal Journal and Engineer*, July 21, 1909.

Harrisburg's Filtration Plant. *Municipal Journal and Engineer*, March 25, 1908.

Wilcox, Delos Franklin. Great Cities in America. Macmillan, New York. 1910. Contains descriptions of Washington's and Philadelphia's filtration.

Baltimore's Filtration Plant. *Municipal Journal* (Baltimore), March 5, 1915.

Municipal Water Purification Plants; partial list of, in the United States and Canada. *Municipal Journal*, July 23, 1914.

(Chicago Sewerage)

Randolph, Isham. The Sanitary District of Chicago, and the Chicago Drainage Canal: A Review of 20 Years of Engineering Work. 1909. Sewage Disposal of the Calumet District. Report of the Chief Engineer, George M. Wisner. June 9, 1909.

The Future Sanitary Problem of Chicago: A Symposium. Discussion by E. H. Lee and others. *Journal of the Western Society of Engineers*, October, 1914.

The Water Power Development of the Sanitary District of Chicago. The report of the Commission on Sewage Disposal and Water Power Development. Proceedings of the Board of Trustees of the Sanitary District of Chicago. November 12, 1914.

(Sewerage)

Waring, George E., Jr. Modern Methods of Sewage Disposal for Towns, Public Institutions and Isolated Houses. D. Van Nostrand Co., New York. 1896.

Kinnicutt, L. P., Winslow, C.-E. A., and Pratt, R. W. Sewage Disposal. New York, 1911.

Fuller, George W. Sewage Disposal. McGraw-Hill, New York. 1912.

General Statistics of Cities: 1909. Department of Commerce: Bureau of the Census. Special Report.

Hering, Rudolph. How to Attack the Sewage and Garbage Problems. *American City* Pamphlet No. 100.

Sewage Disposal in the United States. Location and brief description of more than six hundred plants for treating sewage, sewage disposal and stream pollution in several states, and by state health boards. *Municipal Journal*, June 18, 1914.

Sewage Disposal in the United States. Additional list. *Municipal Journal*, August 20, 1914.

Daniels, Francis E. Operation of Sewage Disposal Plants. *Municipal Journal*, August 20, 1914.

Methods of Sewage Disposal for Texas Cities. University of Texas: Bureau of Municipal Research and Reference. Bulletin No. 362. October 1, 1914.

Webster, George S. The Handling of Sewage Sludge. A paper presented at the annual meeting of the American Society of Mechanical Engineers, New York. December, 1914.

Septic Tanks at Birmingham. *Municipal Journal and Engineer*, December 5, 1906.

Sewage Disposal Plant of Reading, Pennsylvania. *Municipal Journal and Engineer*, November 6, 1907.

Sewage Disposal at Worcester. *Municipal Journal and Engineer*, January 22, 1908.

(New York Sewerage)

Preliminary Reports on the Disposal of New York's Sewage. Metropolitan Sewerage Commission. New York City.

Main Drainage and Sewage Disposal Works. Final Report of the Metropolitan Sewerage Commission of New York. April 30, 1914.

Supplementary Report on the Disposal of New York's Sewage. Critical report of the New York Sewer Plan Commission on the plans of main drainage and sewage disposal proposed for New York by the Metropolitan Sewerage Commission and reply thereto. June 30, 1914.

(*Boston Sewerage*)

Metropolitan Water and Sewerage Board. Annual Reports.

(*Baltimore Sewerage*)

Building a Highway on a Sewer. *Scientific American*, August 16, 1913.

Baltimore's Sewerage System. *Municipal Journal* (Baltimore), September 25, 1914; February 19, 1915.

(*Pasadena's Sewer Farm*)

Pearson, S. F. Pasadena Sewer Farm. *Municipal Journal and Engineer*, May 2, 1906.

Pasadena's City Farm Successful. *National Municipal Review*, January, 1913. Notes and Events.

(*Comfort Stations*)

Ford, Frederick L. Public Comfort Stations. American Civic Association. Leaflet No. 14. March, 1907.

Bradford, Ernest S. Public Convenience Stations of Washington, D. C. *Municipal Journal and Engineer*, November 13, 1907.

Armstrong, Donald B., M.D. Public Comfort Stations: Their Economy and Sanitation. *American City* Pamphlet No. 117.

(*Laundries*)

Free Public Bath Commission of Baltimore. Reports.

Armstrong, Donald B., M.D. Public Laundries in America. *American City* Pamphlet No. 102a.

Federal Bureau of Labor. Bulletin No. 54. 1904.

Platt, Philip S. A Model Wet-Wash Laundry. *American City* Pamphlet No. 122.

Public Wash-tubs for Public Health. *The Literary Digest*, April 4, 1914.

CHAPTER VII

PUBLIC HEALTH

(*General*)

Chapin, Charles Value. Municipal Sanitation in the United States. Snow and Farnham, Providence. 1901.

Baker, M. N. *Municipal Engineering and Sanitation*. Macmillan, New York. 1902.

Allen, William H. *Civics and Health*. Ginn, Boston. 1909.

Godfrey, Hollis. *Health of the City*. Houghton, Boston. 1910.

The Public Health Movement. *The Annals*, March, 1911. Twenty-four articles by authorities, arranged under the following general topics: The General Problem; Disease Carriers—the Control of Causes; Elimination of Diseases—Physical Care of Individuals.

Blair, T. S. *Public Hygiene*. 2 vols. Boston, 1911.

American Public Health Association. *Annual Reports and Papers*.

Fifteenth International Congress on Hygiene and Demography. *Transactions*. Washington, 1912. 6 vols. Government Printing Office, Washington. 1913.

Gorgas and Johnson. *Public Sanitation and the Single Tax*. Joseph Fels Fund. Cincinnati. 1915.

Merriman, Mansfield. *Elements of Sanitary Engineering*. 3d ed. New York. 1906.

Sedgwick, W. T. *Principles of Sanitary Science and the Public Health, with special reference to the causation and prevention of infectious diseases*. New York. 1908.

Hutchinson, Woods. *Instinct and Health*. New York. 1908.

(*Vital Statistics*)

Johnson, George A. *Typhoid Fever in Large American Cities*. *Engineering News*, September 4, 1913.

Mortality Statistics: 1912. Department of Commerce: Bureau of the Census. *Special Report*.

Fifteenth International Congress on Hygiene and Demography. *Transactions*. Washington, 1912. 6 vols. Government Printing Office, Washington. 1913.

Trask, J. W. *Vital Statistics. A discussion of what they are and their use in public health administration*. 2d ed. Washington, 1914.

(*Housing*)

De Forest, Robert W., and Veiller, Lawrence, eds. *The Tenement House Problem*. Macmillan, New York. 1903.

Aronovici, Carol. *Constructive Housing Reform*. *National Municipal Review*, April, 1913.

National Housing Association, New York. Reports and Publications.

Housing Problems in America. National Housing Association, New York. 2 vols.

Ihlder, John. *Reports on Housing*. In *National Municipal Review*: Department of Reports and Reviews.

Veiller, Lawrence. *Housing Reform*. Russell Sage Foundation Publication. Charities Publication Committee, New York. 1910.

Veiller, Lawrence. *A Model Tenement House Law*. Russell Sage Foundation Publication. Charities Publication Committee, New York. 1910.

Veiller, Lawrence. *A Model Housing Law*. Russell Sage Foundation Publication. Survey Associates, Inc., New York. 1914.

Fitzpatrick, F. W. *Model Building Code: A Compilation of Building Regulations covering every phase of municipal building activities, with special emphasis on fire preventive features*. American School of Correspondence, Chicago. 1913.

Riis, Jacob A. *The Battle with the Slum*. Macmillan, New York. 1902.

Ford, James. *Some Fundamentals of Housing Reform*. *American City* Pamphlet No. 99.

Housing and Town Planning. *The Annals*, January, 1914.

de Forest, Robert W. *A Brief History of the Housing Movement in America*. *The Annals*, January, 1914.

Veiller, Lawrence. *Housing Reform through Legislation*. *The Annals*, January, 1914.

Breckinridge, Sophonisba P., and Abbott, Edith, eds. *The Housing Problem in Chicago*. Chicago, 1910-1912.

New York City Tenement House Department. *First Report*. 1902-1903. 2 vols.

Housing Reform in New York City. Report of the Tenement House Committee of the Charity Organization Society of the City of New York. 1911, 1912, 1913.

Ihlder, John. *New York's New Housing Code for Cities of the Second Class*. *The Survey*, February 7, 1914.

Giving Effect to Philadelphia Housing Laws. *The Survey*, January 16, 1915.

An Investigation of Housing Conditions of Cleveland's Workingmen. Department of Public Welfare of the City of Cleveland. No. 1. April, 1914.

Murphy, John J. Some Effects of Housing Regulation. *The Annals*, January, 1914.

(*Markets*)

Mowry, Don E. *Municipal Markets: An Economic Necessity*. Reprinted from *Government Magazine*.

Sinclair, John F., and Hallam, Clark. Report upon Co-operation and Marketing. Part III. *Municipal Markets*. Wisconsin State Board of Public Affairs. Madison, 1912.

Williamson, C. C. Selected references on markets and marketing. (*In Special Libraries*, March, 1913.)

New York City. Mayor's Market Commission. Report. December, 1913. New York, 1914.

Miller, Cyrus C. *Municipal Market Policy*. *American City* Pamphlet. 1912.

Sullivan, James William. *Markets for the People: The Consumers' Part*. Macmillan, New York. 1913.

Preliminary Report to the Mayor and Aldermen of the City of Chicago by the Chicago Municipal Markets Commission. Chicago, April 27, 1914.

King, Clyde Lyndon. Lower Living Costs in Cities. Appleton, New York. 1915.

Mowry, Don E. A Small City's Market Place. *American City*, July, 1911.

King, Clyde Lyndon. Municipal Markets. *The Annals*, November, 1913.

Thrift, James F., and Childs, William T. Some Typical American Markets: II. Baltimore's Markets. *The Annals*, November, 1913.

Carter, J. F. Public Markets and Marketing Methods. *American City*, February, 1913.

Kamp, Charles. Some Typical American Markets: III. Municipal Markets in Cleveland. *The Annals*, November, 1913.

A Public Refrigerator. *The Literary Digest*, September 19, 1914.

Burk, Annis. Some Typical American Markets: IV. The Indianapolis Market. *The Annals*, November, 1913.

Tiefenthaler, Leo. Some Typical American Markets: V. The Milwaukee Municipal Market. *The Annals*, November, 1913.

Lippincott, Achsah. Some Typical American Markets: VI. Municipal Markets in Philadelphia. *The Annals*, November, 1913.

Merrill, E. W. Some Typical American Markets: VII. The Rochester Public Market. *The Annals*, November, 1913.

(Rochester Milk Supply)

Goler, George W., M.D. "But a Thousand A Year." The Cost and the Results in Rochester of Feeding Clean Milk as Food for the Hand-Fed Baby. Reprinted from *Charities*, August 5, 1905. 2d ed. April, 1907.

Goler, George W., M.D. Clean Milk. Reprinted from *Archives of Pediatrics*, June, 1910.

Bureau of Health of the City of Rochester, New York. Report for September, 1914.

(Infant Welfare)

Fifteenth International Congress on Hygiene and Demography. Transactions. Washington, 1912. 6 vols. Government Printing Office, Washington. 1913.

National Congress of Mothers, Washington, D. C. Proceedings. 1897 to date.

American Association for Study and Prevention of Infant Mortality. Proceedings. 1910, 1911 and 1912. Johns Hopkins University Press, Baltimore.

Rosenau, Milton Joseph. Milk Question. Houghton, Boston. 1912.

Magruder, G. S. Solution of the Milk Problem. Beresford, Washington. 1913.

Alvord, H. E., and Pearson, R. A. The Milk Supply of Two Hundred Cities and Towns. United States Department of Agriculture: Bureau of Animal Industry. Bulletin No. 46. Washington. 1903.

New York Milk Committee — Committee for the reduction of infant mortality. Infant mortality and milk stations; investigation of work carried on in the ten largest cities of the United States in 1911. Edited

by Philip Van Ingen and P. E. Taylor. *New York Milk Committee, 1912.*

New York Milk Committee—Commission on Milk Standards. Report printed by the United States Public Health Service. 1912, 1913.

Spargo, John. *The Common Sense of the Milk Question.* New York. 1908.

Larson, J. H. *New York's Balance Sheet of Infant Life Saving. American City,* March, 1915.

Birth Registration. United States Department of Labor: Children's Bureau. Monograph No. 1. Government Printing Office, Washington. 1913.

Baby-Saving Campaigns: A Preliminary Report on what American Cities are doing to prevent Infant Mortality. United States Department of Labor: Children's Bureau. Publication No. 3. Government Printing Office, Washington. 1913.

Jacobi, Abraham. Best Means of Combating Infant Mortality. *New York Medical Journal,* June 8, 1912.

Babbitt, E. C. Work for Expectant Mothers in Certain American Cities. *Woman's Medical Journal,* January, 1913.

Neff, Joseph S., M.D. Efficiency in Child Saving. *The Annals,* May, 1912.

(School Medical Inspection) (School Nurses)

Fourth International Congress on School Hygiene. Proceedings. Buffalo, August 25-30, 1913.

School Hygiene: A Short Reading List to celebrate the Fourth International Congress on School Hygiene, August 25-30, 1913.

Cornell, Walter S., M.D. *Health and Medical Inspection of School Children.* F. A. Davis Co., Philadelphia. 1912.

Dresslar, Fletcher Bascom. *School Hygiene.* Macmillan, New York. 1913.

Burks, Frances Williston, and Jesse D. *Health and the School.* Appleton, New York. 1913.

Gulick, Luther Halsey, and Ayres, Leonard P. *Medical Inspection of Schools.* Russell Sage Foundation Publications. Survey Associates, Inc., New York. 1913.

Newmayer, S. W. *Medical and Sanitary Inspection of Schools.* Lea and Febiger, Philadelphia. 1913.

Rapeer, Louis W. *School Health Administration.* Teachers College, New York. 1913.

Hoag, Ernest Bryant, M.D. *Organized Health Work in Schools. With an account of a campaign for School Hygiene in Minnesota.* United States Bureau of Education. Bulletin No. 44. Washington, 1913.

Ryan, W. Carson, Jr. *School Hygiene: A Report of the Fourth International Congress on School Hygiene, Buffalo, New York, August 25-30, 1913.* United States Bureau of Education. Bulletin No. 48. Washington, 1913.

Brown, Edward T. *World Gathering of School Hygienists.* *The Survey,* October 11, 1913.

Hoag, Ernest Bryant, M.D., and Terman, Lewis M. *Health Work in the Schools*. Houghton, Boston. 1914.

Public Education Association. *Twenty-fourth Annual Report*, 1905. *Medical Inspection of Schools*.

Brown, Edward F. *The Health Supervision of School Children of New York City*. Reprinted from the *Medical Review of Reviews*, September, 1914. New York Association for Improving the Condition of the Poor, 105 East 22d Street, New York City. 1914.

What American Cities are Doing for the Health of School Children. Russell Sage Foundation: Division of Education. No. 101.

Heck, W. H. *The Health of School Children*. United States Bureau of Education. Bulletin No. 4. Washington, 1915.

(*Dental Clinics*)

Taking Care of School Children's Teeth. *The Survey*, October 24, 1914.

Belcher, William W. *The Dental Dispensary at No. 14 School*. *The Common Good of Civic and Social Rochester*, October, 1910.

Leary, Timothy, M.D. *The Purpose of the Forsyth Dental Infirmary*. Reprinted from the *Boston Medical and Surgical Journal*, February 6, 1913.

(*Municipal Hospitals*)

Holmes, Christian R., M.D. *Hospitals and Their Relation to Medical Colleges and the Training of Interns*. A paper read at the Tenth Annual Conference of the Council on Medical Education, Chicago. February 24, 1914.

A City that Doctors Itself. *The Outlook*, August 29, 1914. Editorial.

Hospital Social Service Association of Cincinnati. *Annual Report*. 1913-1914.

(*Tuberculosis*)

Journal of the Outdoor Life. Official organ of the National Association for the Study and Prevention of Tuberculosis, 105 East 22d Street, New York City.

Preventing Tuberculosis in New York City. Report of the Committee on the Prevention of Tuberculosis of the Charity Organization Society of the City of New York for 1911-1912-1913.

Dispensary Control of Tuberculosis: Children's Clinics. Fifth Annual Report of the Association of Tuberculosis Clinics of the City of New York. 1912.

Billings, John S., Jr. *The Tuberculosis Clinics and Day Camps of the Department of Health*. July, 1912. Department of Health of the City of New York. Monograph series No. 2.

Sachs, Theodore B., M.D. *Chicago Plan for Municipal Control of Tuberculosis: The Chicago Municipal Tuberculosis Sanitarium and Its Auxiliary Agencies*. *Journal of the Outdoor Life*, February, 1915.

Nurses' Papers on Tuberculosis. Dispensary Department. Bulletin No. 1. Published by Municipal Tuberculosis Sanitarium, 105 West Monroe Street, Chicago, Illinois.

Bishop, R. H., Jr., M.D. The Fight against Tuberculosis in Cleveland. *Journal of the Outdoor Life*, February, 1915.

Consumptives' Hospital Department of the City of Boston. Annual Reports. 1906 to date.

Department of Charities and Correction of the City of Cincinnati. Report for the year 1913. Report of the Cincinnati Tuberculosis Sanitarium.

Batzell, Paul E. Letting the Sun Cure Tuberculosis in Children. *The Survey*, October 31, 1914.

Davis, N. S. Consumption: how to prevent it and how to live with it. Philadelphia, 1908.

Knopf, S. A. Tuberculosis as a Disease of the Masses, and How to Combat It. 7th American ed. New York, 1911.

Otis, E. O. Tuberculosis: Its cause, cure and prevention. A revised edition of "The Great White Plague." New York, 1914.

(*Infectious Diseases*)

New Contagious Disease Hospital, Chicago. Annual Message of Mayor Carter H. Harrison, May 18, 1914.

Hospital for Infectious Diseases (Rochester, New York). Report of the Bureau of Health of the City of Rochester for the month of February, 1914.

New York City. Department of Health. Handbook of information regarding the routine of procedure of the bureau of infectious diseases. New York, 1914.

(*Flies*)

Hewitt, C. G. House-flies and How They Spread Disease. New York, 1912.

Howard, L. O. The House Fly—Disease Carrier. Washington, 1912.

Stockbridge, Frank Parker. How to get rid of Flies. *The World's Work*, April, 1912.

Flies: The Fly Campaign. Department of Public Safety of the City of Rochester, New York. Annual Report for the Year 1913.

An Official Fly Catcher. *The World's Work*, March, 1915.

Cleveland's Little "Fly-Copa." *The Literary Digest*, March 6, 1915.

The First Flyless City. *The Independent*, May 3, 1915.

(*Mosquitoes*)

A City Bat-Roost. *The Literary Digest*, April 17, 1915.

Essex County Mosquito Extermination Commission, Newark, New Jersey. Report for the Year 1912-1913.

Richards, L. J. Real Progress in Mosquito Extermination. *American City*, March, 1914.

Mosquito Campaign. Bureau of Highways and Street Cleaning of the City of Philadelphia. Annual Report for the Year 1913.

(Rats)

Department of Public Health and Charities. City of Philadelphia. Plague Prevention Message No. 1.

CHAPTER VIII

PROTECTION

(Fire)

Aquatic Fire Fighters. *The Outlook*, July 18, 1914. Editorial. Babcock, Ross. Modern Motor Fire Apparatus. *Scientific American*, March 28, 1914.

Transforming the Trade of the Fire Fighter. *Collier's*, June 7, 1913. Booth, George W. Automobile Fire Apparatus. A Report submitted as Chairman of the National Fire Protection Association Committee on Automobile Fire Apparatus. May, 1913.

Heydecker, Wayne D. The Two-Platoon System in the Fire Department. *American City*, April, 1914.

Fuertes, James. Abstract of report on water pressure in its relation to automatic sprinklers for fire prevention. *Bulletin of the Merchants' Association of New York*, July 20, 1914.

United States Geological Survey. Bulletin No. 418. The Fire Tax and Waste of Structural Materials in the United States, by Herbert M. Wilson and John L. Cochrane. Government Printing Office, Washington. 1910.

National Board of Fire Underwriters, New York. Report of the Committee on Statistics and Origin of Fires. May 28, 1914.

Bureau of Fire of the City of Philadelphia. Annual Report for the year 1913.

United States. Library of Congress. Division of Bibliography. Selected list of references on fire protection. Washington, 1913. Printed also in *Special Libraries*, February, 1913.

Croker, Edward Franklin. Fire Prevention. Dodd, New York. 1912. Bennett, Walter H. Fire Prevention from a Legislative Viewpoint. Address before the ninth annual convention of the Fire Marshals' Association of North America at Asheville, North Carolina. September 11, 1914.

Evans, Powell. Fire Waste. *The Annals*, January, 1914.

Evans, Powell. A Five-Years' Fight against Fire Waste in the United States, 1908-1912, inclusive. Philadelphia, 1912.

Wohlgemuth, E. Jay. The First Municipal Fire Prevention Club in the United States. *American City*, March, 1913.

Board of Fire Commissioners, Newark, New Jersey. Twenty-eighth Annual Report for the year ending December 31, 1913.

Johnson, Joseph. Recent Progress in Fire Prevention and Fire Fighting in New York City. *American City*, September, 1913.

Newark Fire Department. *Municipal Journal*, April 9, 1914.

National Board of Fire Underwriters. Report of the Committee on Fire Prevention of the City of Chicago, Illinois, being supplement to Report No. 208. July 17, 1914.

Fire Prevention. Danger zone; building codes; private and public extinguishing appliances; control of occupancy hazard; state and municipal laws. *Contract Record*, October 28, 1914.

Ray, Martin H. Fighting Fires Before They are Lit. *American City* Pamphlet No. 105.

(Police)

Fuld, Leonhard Felix. Police Administration: A Critical Study of Police Organizations in the United States and Abroad. Putnam's, New York. 1909.

Fuld, Leonhard Felix. The Organization of Police Forces. National Municipal League. Proceedings. 1910.

Wilcox, Delos Franklin. Great Cities in America. Macmillan, New York. 1910.

McCaffrey, George H. The Police and the Administration of Justice. *The Annals*, March, 1914.

Bostwick, Andrew Linn, comp. Municipal Police Departments. Tables showing the size of the police departments of thirteen of the largest cities of the United States in relation to population, area and street mileage. Municipal Reference Library, St. Louis Public Library, January 1, 1915.

McAdoo, William. Guarding a Great City. New York, 1906.

Whitlock, Brand. Forty Years of It. Appleton, New York. 1914.

Howe, Frederic C. The Modern City and Its Problems. Scribner's, New York. 1915.

(Police Matrons and Policewomen)

Fuld, Leonhard Felix. Police Administration. Putnam's, New York. 1909.

Women Police Increased. *Municipal Journal*, January 29, 1914. In Fire and Police.

Wells, A. S. Women on the Police Force. *American City*, April, 1913.

Wells, Alice Stebbins. Police Women. *The Survey*, July 25, 1914. Communications.

A "City Mother." *National Municipal Review*, January, 1915. Notes and Events.

Policewomen in Chicago, *The Literary Digest*, August 28, 1913.

(Traffic Police)

Eno, William Phelps. Street Traffic Regulation. Rider and Driver Publishing Co., New York. 1909.

Rules and Regulations Governing Street Traffic in Philadelphia. *Engineering and Contracting*, September 30, 1914.

Eno, William Phelps, Standardized Street Traffic Regulation. *American City*, September, 1913.

(Safety Commission)

Hoffman, Peter M. Biennial Report of the Coroner of Cook County, Illinois. 1912-1913.

Will Flash Red Light Signals to Protect the Charles River Basin Resorts. *The Sunday Herald*, Boston, February 21, 1915.

(Regulation of Alcohol)

Edwards, R. H., ed. The Liquor Problem. Madison, 1908.

Warner, H. S. Social Welfare and the Liquor Problem: Studies in the sources of the problem and how they relate to its solution. Rev. ed. Chicago, 1913.

Committee of Fifty. Series of Investigations. 6 vols. Boston, 1898-1905.

("The Social Evil")

The American Social Hygiene Association, New York. Publications.

The Minnesota Red Light Injunction and Abatement Law. Introduced in the Legislature through the efforts of the Woman's Club of Minneapolis and enacted into Law April 26, 1913.

The Social Evil in Chicago: A Study of Existing Conditions with Recommendations by the Vice Commission of Chicago. Gunthrop-Warren Printing Co., Chicago. 1911.

The Social Evil (Portland, Oregon). *National Municipal Review*, January, 1913. Reports and Documents.

Chicago Morals Commission Appointed. *The Survey*, February 6, 1915.

Morals Efficiency Commission. Pittsburgh, Pennsylvania. Report and recommendations of the commission. 1913.

St. Louis, Missouri. Committee of One Hundred for the Suppression of Commercialized Vice in St. Louis. Brief in support of citizens' memorial to the board of Police Commissioners of St. Louis, Missouri, on the illegality and inexpediency of segregating commercialized vice in St. Louis.

Seligman, Edwin R. A. The Social Evil. With Special Reference to Conditions Existing in the City of New York. 2d ed.; rev., with new material. Putnam's, New York. 1912.

Addams, Jane. A New Conscience and an Ancient Evil. New York, 1913.

CHAPTER IX

JUSTICE AND CHARITY

(Municipal Courts)

Foster, S. A. The Municipal Court of Chicago. 2d ed. Chicago, 1912.

Harley, Herbert. The Model Municipal Court. *National Municipal Review*, January, 1914.

The Municipal Court of Chicago. Seventh Annual Report for the Year December 2, 1912, to November 30, 1913.

Moley, Raymond C. Justice through Common Sense: The Conciliation Court. *The Survey*, October 31, 1914.

Bolster, Wilfred. Adult Probation. *The Annals*, March, 1914.

New York State. Probation Commission. Annual Report, 1912-1913.

Bartelme, Mary M. The Opportunity for Women in Court Administration. *The Annals*, March, 1914.

(Juvenile Courts)

Mangold, George B. Child Problems. Macmillan, New York. 1910.

Eliot, Thomas D. The Trend of the Juvenile Court. *The Annals*, March, 1914.

Lindsey, Edward. The Juvenile Court Movement from a Lawyer's Stand-point. *The Annals*, March, 1914.

Report of Hon. Ben B. Lindsey, Chairman of Committee on Juvenile Courts, before the International Congress on the Welfare of the Child. Held under the auspices of The Mothers' Congress at Washington, D. C., April 22-27, 1914.

Street, Elwood. Going the Juvenile Court One Better. *The Survey*, October 24, 1914.

Flexner, Bernard, and Baldwin, Roger N. Juvenile Courts and Probation. Century, New York. 1914.

New York State. Probation Commission. Annual Report. 1912-1913. Contains report of an inspection of the Buffalo Children's Court.

Coulter, Ernest K. The Children in the Shadow. New York, 1913.

Court of Special Sessions of the City of New York. Annual Report for the year ending December 31, 1913.

Juvenile Court, City and County of Denver, Colorado. Reports.

Eliot, Thomas D. The Juvenile Court and the Community. Macmillan, New York. 1914.

Hornbeck, S. K. Juvenile Courts. Prepared with the co-operation of the Political Science Department of the University of Wisconsin. Madison, 1908.

(Juvenile Court of Chicago)

Hurley, T. D., comp. Origin of the Illinois Juvenile Court Law; Juvenile courts and what they have accomplished. 3d ed. Chicago, 1907.

Juvenile Court and Juvenile Detention Home. (Cook County, Illinois.)
Annual Reports for the year 1913.

Breckinridge, Sophonisba P., and Abbott, Edith. The Delinquent Child
and the Home. Chicago, 1912.

(Court of Domestic Relations)

The Municipal Court of Chicago. Seventh Annual Report for the year
December 2, 1912, to November 30, 1913.

Gemmill, William N. Chicago Court of Domestic Relations. *The Annals*,
March, 1914.

(New York Night Court)

Whitin, Frederick H. The Women's Night Court in New York City.
The Annals, March, 1914.

(Psychopathic Institutes)

The Municipal Court of Chicago. Seventh Annual Report for the year
December 2, 1912, to November 30, 1913.

Juvenile Court and Juvenile Detention Home. (Cook County, Illinois.)
Annual Reports for the year 1913.

Chicago Psychopathic Laboratory. *National Municipal Review*, January,
1915. Notes and Events.

Healy, William, M.D. Medicopsychological Work in Courts. Reprinted
from the *Illinois Medical Journal*, October, 1914.

Spaulding, Edith R., M.D., and Healy, William, M.D. Inheritance as a
Factor in Criminality. A Study of a Thousand Cases of Young Re-
peated Offenders. Reprinted from the *Bulletin of the American Acad-
emy of Medicine*, February, 1914.

Bronner, Augusta F. A Research on the Proportion of Mental Defectives
among Delinquents. Reprinted from the *Journal of Criminal Law
and Criminology*, November, 1914.

Healy, William, M.D. The Individual Delinquent. Little, Brown, Bos-
ton. 1915.

Hickson, William J., M.D. Organic Brain Lesions in Mental Defectives.
Reprinted from the *Illinois Medical Journal*, October, 1914.

Ransom, John Edward. A Study of Mentally Defective Children in
Chicago. An Investigation made by the Juvenile Protective Associa-
tion. 1915.

(Public Defender)

Gray, R. S. The Advisability of a Public Defender. *The Annals*, March,
1914.

A Public Defender of the Poor. *The World's Work*, May, 1914.

Bartlett, Dana W. The Public Defender. *National Municipal Review*,
April, 1914. Notes and Events.

MacCulloch, Campbell. Here is Justice! *Everybody's Magazine*, August,
1914.

Wood, Walton J. The Office of Public Defender; letters from Walton J. Wood, public defender, to bar associations of New York and Milwaukee; comments of the district attorney, judges and the press of Los Angeles; Los Angeles county charter provisions. Los Angeles, June, 1914.

Wood, Walton J. The Place of the Public Defender in the Administration of Justice. Address before the California Bar Association at its fifth annual convention, November, 1914.

New York Public Library. Municipal Reference Branch. Selected references on the office of public defender. Municipal Reference Library Notes, January 27, 1915.

(Court Fines by Installments)

The Payment of Fines in Installments by Offenders. Municipal Reference Library, Chicago. Mun. Ref. Bul. No. 4. November, 1914.

An Installment Fine as an Aid to Justice. *American City*, January, 1914. Editorial Comment.

(Correctional Institutions)

Court of Special Sessions of the City of New York. Annual Report for the year ending December 31, 1913.

Kansas City Municipal Farm. The Topeka Improvement Survey, Part III. By Zenas L. Potter. May, 1914.

Department of Public Safety of the City of Cincinnati: Department of Charities and Correction. 2d Annual Report for the year 1913.

Report of the Superintendent of the House of Correction of the City of Cleveland for the year 1913.

Department of Public Welfare of the City of Cleveland: Division of Charities and Correction. Reports.

(Socialising Charity)

Halbert, L. A. Effective Charity Administration. *The Annals*, May, 1912.

Municipal Charities Commission, City of Los Angeles, California. First Annual Report, July 1, 1913, to July 1, 1914.

Department of Public Safety of the City of Cincinnati: Department of Charities and Correction. 2d Annual Report for the year 1913.

Norton, W. J. Dr. Geier's Work in the Cincinnati Department of Charities. *The Survey*, May 9, 1914.

(Departments of Public Welfare)

Municipal Employees ask for Lower Salaries. *The Survey*, September 26, 1914.

Board of Public Welfare, Kansas City, Missouri. Reports.

The Department of Public Welfare of the City of Dayton. First annual report for 1914.

Department of Public Welfare of the City of Chicago. First semiannual report. Chicago, March 15, 1915.

Department of Public Welfare of the City of Cleveland. Reports.

Social Welfare Department of the City and County of Denver, Colorado. Reports. 1913 to date.

(Widows' Pensions)

Laws Relating to "Mothers' Pensions" in the United States, Denmark and New Zealand. United States Department of Labor: Children's Bureau. Publication No. 7. Washington, 1914.

Report Relative to Proposed Legislation Providing Pensions to Widows with Children. Submitted to Hon. William A. Prendergast, Comptroller of the City of New York, by the Bureau of Municipal Investigation and Statistics. January 25, 1915.

Department of Public Safety of the City of Cincinnati: Department of Charities and Correction. 2d annual report for the year 1913.

Widows' Pension Bureau of San Francisco. Report for the year 1914.

(Municipal Lodging Houses)

St. Louis, Missouri. Public Library. List of references on municipal lodging houses. In *Monthly Bulletin*, new series, July, 1912.

Report of the Mayor's Commission on Unemployment. Chicago, March, 1914.

Department of Public Safety of the City of Cincinnati: Department of Charities and Correction. 2d annual report for the year 1913.

Kingsbury, John A. Our Army of the Unemployed: A Momentous Problem of Relief and of Industry. *The American Review of Reviews*, April, 1914.

Stearns, George W. Giving Down-and-Outers a Chance to Come Back. New York City's Lodging House is no longer a "Morgue of the Living." *New York Tribune*, January 24, 1915.

Brown, Edwin A. Municipal Lodging Houses. *National Municipal Review*, January, 1915.

Jakobi, Paula. The Lodging-House. *The Outlook*, April 21, 1915.

(Municipal Employment)

Brookings, W. D., and Ringwalt, R. C. Briefs for Debate. 2d ed. Longmans Green, New York. 1911. Contains a bibliography on municipal aid for the unemployed.

Chicago Municipal Markets Commission. Report to the mayor and aldermen on a practical plan for relieving destitution and unemployment in the city of Chicago. December 28, 1914.

Chicago, Illinois. Mayor's commission on unemployment. Report, March, 1914.

Kellor, Frances A. Out of Work: A Study of Unemployment. Putnam's, New York. 1915.

Kellor, Frances A. Is Unemployment a Municipal Problem? *National Municipal Review*, April, 1914.

Kellor, Frances A. Unemployment in Our Cities. *National Municipal Review*, January, 1915.

Kellor, Frances A. Unemployment in American Cities: The Record for 1914-15. *National Municipal Review*, July, 1915.

New York's Program for Unemployment. *The Survey*, December 26, 1914.

Unemployment Problems and Relief Efforts in Seventeen Cities. *The Survey*, January 2, 1915.

Municipal Charities Commission, City of Los Angeles, California. First annual report, July 1, 1913, to July 1, 1914.

Citizens' Committee on Unemployment and the Milwaukee Free Employment Office. Second annual report to the Common Council, City of Milwaukee; Board of Supervisors, County of Milwaukee; and the Industrial Commission of Wisconsin, for the year ending October 31, 1913.

Industrial Commission of Wisconsin, Madison, Wisconsin. Report on Allied Functions. For the two years ending June 30, 1914.

Industrial Commission of Wisconsin, Madison, Wisconsin. Bulletin. May 20, 1913. This number contains a report on the Wisconsin Free Employment Offices.

Chicago's City Grocery Store for the Unemployed. *The Survey*, March 14, 1914.

Matthews, William H. Wages from Relief Funds. *The Survey*, June 12, 1915.

Nash, Margaret. Municipal Employment Bureaus in the United States. *National Municipal Review*, July, 1915.

CHAPTER X

INDOOR EDUCATION

(General)

Monroe, Paul. A Cyclopedia of Education. 5 vols. Macmillan, New York. 1911-1913.

Perry, Arthur Cecil. Problems of the Elementary School. Appleton, New York. 1910.

Munroe, James Phinney. New Demands in Education. Doubleday, New York. 1912.

King, Irving. Social Aspects of Education. Macmillan, New York. 1913.

King, Irving. Education for Social Efficiency. Appleton, New York. 1913.

Garber, John Palmer. Current Activities and Influence of Education. Lippincott, Philadelphia. 1913.

Maxwell, W. H. A Quarter Century of Public School Development. New York, 1912.

Dresslar, Fletcher Bascom. School Hygiene. Macmillan, New York. 1913.

Burks, Frances Williston, and Jesse D. *Health and the School*. Appleton, New York. 1913.

Cabot, Ella Lyman. *Volunteer Help to the Schools*. Houghton, Boston. 1914.

National Education Association: *Proceedings*.

United States Commissioner of Education, *Reports*.

Compulsory School Attendance. *Bulletin of the Bureau of Education*. Washington, 1914. (Bibliography.)

Special Features in City School Systems. *Bulletin of the Bureau of Education*. Washington, 1913.

A Generation of Progress in Our Public Schools. Issued by the Public Education Association, Philadelphia. 1914.

Martin, John. *School Progress in New York City*. *National Municipal Review*, July, 1913.

New York City. School Inquiry Committee. *Final Report of the Committee*. 3 vols. 1913.

New York School Inquiry: Reply of the Superintendents to Certain Findings and Recommendations of Prof. Frank M. McMurry and Prof. Edward C. Elliott. Prepared by a committee. Edited by Joseph S. Taylor, 2,275 Loring Place, The Bronx, New York.

A Primer of Public School Progress. Issued by the Public Education Association of the City of New York, 1914.

Mayers, Lewis. *The New York School Inquiry*. *National Municipal Review*, April, 1914.

(*Kindergartens*)

Kindergartens in the United States: Statistics and Present Problems. *Bulletin of the Bureau of Education*. Washington, 1914.

Ward, Florence Elizabeth. *The Montessori Method and the American School*. Macmillan, New York. 1913.

O'Grady, Alice. *American Kindergartens and Montessori Schools*. *Educational Bimonthly*, April, 1914.

International Kindergarten Union. *Proceedings*.

(*Elementary Grades*)

Perry, Arthur Cecil. *Problems of the Elementary School*. Appleton, New York. 1910.

Hughes, Harold F. *Suiting the Course to the Child: Fresno's System of Grading*. *American School Board Journal*, March, 1913.

Bunker, Frank F. *A Better Articulation of the Parts of the Public School System*. *Educational Review*, March, 1914.

The Money Cost of Repetition Versus the Money Saving Through Acceleration. Russell Sage Foundation: Division of Education. No. E 111.

The Relation Between Entering Age and Subsequent Progress among School Children. Russell Sage Foundation: Division of Education. No. E 112.

(Manual Training)

Ham, Charles Henry. *Mind and Hand*. American Book Company, New York. 1900.

Chamberlain, Arthur H. *A Bibliography of the Manual Arts*. A. Flanagan Co., Chicago. 1902.

Leavitt, Frank Mitchell. *Some Examples of Industrial Education*. Ginn, Boston. 1912.

Vocational Training in the United States. A summary by Wallace E. Hackett. Published by the Board of School Directors, Reading, Pa. (It gives a list of the practical arts subjects taught in each grade in 147 cities in the United States and the time devoted to these subjects.)

Leavitt, Frank Mitchell. *Prevocational Education in the Public Schools*. Houghton, Boston. 1915.

Dewey, John. *The School and Society*. Rev. ed. The University of Chicago Press, Chicago. 1915.

(Domestic Science)

Leavitt, Frank Mitchell. *Some Examples of Industrial Education*. Ginn, Boston. 1912.

Kittredge, Mabel Hyde. *Housekeeping Centers in Settlements and Public Schools*. *The Survey*, May 3, 1913.

Clewell, H. E. The "Holly Plan" for the Teaching of Domestic Science and Art in the Public Schools. *American Education*, April, 1914.

(Art)

The Board of Public Education: School District of Pittsburgh. 2d Annual Report for the year ending December 31, 1913.

Department of Education. The City of New York. 16th Annual Report of the City Superintendent of Schools. 1913-1914. Drawing in High Schools; Drawing in Elementary Schools; Shopwork in Elementary Schools.

The School Art League, New York. Bulletins.

Putnam, Alice. Children's Art Hours in the Carnegie Institute. *Art and Progress*, August, 1914.

Clewell, H. E. The "Holly Plan" for the Teaching of Domestic Science and Art in the Public Schools. *American Education*, April, 1914.

Bailey, Henry Turner, and Burrage, Severance. *School Sanitation and Decoration*. Heath, Boston. 1899.

Bailey, Henry Turner, ed. *School Arts Journal*. Monthly.

(Music)

The Board of Public Education. School District of Pittsburgh. 2d Annual Report for the year ending December 31, 1913.

Claxton, Philander P. The Place of Music in Education. *School Music*, January, 1913.

Earhart, Will. Music in the Public Schools. Bulletin of the Bureau of Education, No. 33, Washington, 1914.

(Civics)

Hill, Mabel. *The Teaching of Civics*. Houghton, Boston. 1914.

Moody, Walter D. *Wacker's Manual of the Plan of Chicago*. Especially Prepared for Study in the Schools of Chicago. 1912.

Package Libraries for the Study of Civics. *Chicago Public Library Book Bulletin*. December, 1914.

A Neighborhood Studying Itself. By Edward L. Burchard, Director of Extension Department of the Chicago School of Civics and Philanthropy. An address at the City Club of Chicago, March 6, 1915.

Dana, John Cotton. *The Public Library and Publicity in Municipal Affairs*. *Library Journal*, April, 1913.

Special Features in City School Systems. *Bulletin of the Bureau of Education*, Washington, 1913.

Connolly, Louise. *Sane Methods of Civic Education*. *National Municipal Review*, April, 1914.

Civic Education and the National Bureau of Education. *National Municipal Review*, April, 1914.

(Self-Government)

Gill, Wilson L. *A New Citizenship*. American Patriotic League, Philadelphia. 1913.

(Moral Education)

Bible Study in North Dakota Schools. *The Literary Digest*, February 14, 1914.

Palmer, George Herbert. *Ethical and Moral Instruction in Schools*. Houghton, Boston. 1909.

Religious Education. The Journal of the Religious Education Association, Chicago.

Davis, J. B. *Vocational and Moral Guidance*. Ginn, Boston. 1914.

(Hygienic Teaching)

Ritchie, J. W. *Primer of Hygiene and Sanitation*; being a simple text-book on personal and public health. Yonkers, 1913.

Coleman, W. M. *A Handbook of the People's Health*; a text-book of sanitation and hygiene for the use of schools. New York, 1913.

Lowry, E. B., M.D. *Teaching Sex Hygiene in the Public Schools*. Forbes, Chicago. 1914.

Phelps, Editha. *Sex Hygiene in the Schools*. *Life and Labor*, February, 1914.

Special Features in City School Systems. *Bulletin of the Bureau of Education*, Washington, 1913.

International Congress on School Hygiene. *Proceedings*. Buffalo, 1913. Printed by the Courier Company, Buffalo.

The United States Commissioner of Education, *Reports*.

Hoag, Ernest Bryant, M.D., and Terman, Lewis M. *Health Work in the Schools*. Houghton, Boston. 1914.

(Physical Training)

Childs, W. L. How Can Physical Training be made of Greatest Value to the High School Boy? *School Review*, February, 1914.

Martin, John. School Progress in New York City. *National Municipal Review*, July, 1913.

Raub, Edgar L. Athletics for Elementary Schoolboys in Boston. In School Hygiene by Dr. W. Carson Ryan. United States Bureau of Education Bulletin, 1913.

(Exceptional Children)

Van Sickle, James H., Witmer, Lightner, and Ayres, Leonard P. Provision for Exceptional Children in Public Schools. Bulletin of the Bureau of Education, Washington, 1911.

Special Features in City School Systems. Bulletin of the Bureau of Education. Washington, 1913.

International Congress on School Hygiene. Proceedings. Buffalo, 1913. Published by the Courier Company, Buffalo.

Farrell, Elizabeth E. A Study of the School Inquiry Report on Ungraded Classes. *Psychological Clinic*, April, 1914. (New York City.)

Ayres, Leonard P. Laggards in Our Schools. Russell Sage Foundation Publication. Charities Publication Committee, New York. 1910.

Reeves, Edith. Care and Education of Crippled Children in the United States. Russell Sage Foundation Publications. Survey Associates, New York. 1914.

(School Lunches)

Bryant, Louise Stevens. School Feeding: Its History and Practice at Home and Abroad. Lippincott, Philadelphia. 1913.

International Congress on School Hygiene. Proceedings. Buffalo, 1913.

Boughton, Alice. The Administration of School Lunches in Cities. *Journal of Home Economics*, June, 1914.

School Lunches in Philadelphia. Published by the School Lunch Committee of the Home and School League, Philadelphia. 1912-1913. (Bibliography.)

The School Lunch Service in New York City. By Edward F. Brown, Executive Secretary New York School Lunch Committee. Bulletin No. 3. Issued by the Division of Reference and Research, Department of Education, New York City.

The Provision of School Lunches. *National Municipal Review*, January, 1914. Notes and Events.

(The Home School)

Condon, Randall J. The Home School. Eighty-fourth Annual Report of the Cincinnati Public Schools for the Year ending August 31, 1913. pp. 67-72.

Condon, Randall J. The Home School—An Experiment in Household Education. National Education Association. Proceedings. 1913.

CHAPTER XI

OUTDOOR EDUCATION

(School Gardens)

Special Features in City School Systems. *Bulletin of the Bureau of Education*. Washington, 1913.

Martin, John. School Progress in New York City. *National Municipal Review*, July, 1913.

Cabot, Ella Lyman. *Volunteer Help to the Schools*. Houghton, Boston. 1914.

Cadwallader, Starr. The Cleveland Home Gardening Association. *The Chautauquan*, June, 1906.

Kilpatrick, V. E. School Gardens in America. *American School Board Journal*, May, 1914.

Dyer, Walter A. School Gardens. *Craftsman*, June, 1914.

Hanmer, Lee F., and Knight, Howard R. Sources of Information on Recreation. Russell Sage Foundation: Department of Recreation. No. Rec. 136.

Greene, M. Louise. Among School Gardens. Russell Sage Foundation Publications. Survey Associates, New York. 1910.

(Agricultural Education)

Robison, C. H., and Jenks, F. B. Agricultural Instruction in High Schools. *Bulletin of the Bureau of Education*. Washington, 1913.

Hummel, W. G. Community or Local Extension Work of the High School Agricultural Department. Berkeley, California. University of California, 1914.

Meek, C. S. Some Experiments in School Systems and Their Outcomes: Developing a School System. National Education Association. Proceedings. 1913.

Palmer, Clayton F. Agriculture and Gardening in the Public Schools. National Education Association. Proceedings. 1913.

(Home Credits)

The United States Commissioner of Education, Reports.

Alderman, L. R. School Credit for Home Work. Houghton, Boston. 1915.

Schermerhorn, Grace. School Credit for Home Work in Home Economics. *Journal of Home Economics*, April, 1914.

Alderman, L. R. School Credit for Home Industrial Work. National Education Association. Proceedings. 1913.

(Vacation Schools)

Perry, Clarence Arthur. Wider Use of the School Plant. Russell Sage Foundation Publications. Charities Publication Committee, New York. 1910.

Perry, Clarence Arthur. American Vacation Schools of 1912. Pamphlet No. R 133. Russell Sage Foundation. 1913.

Martin, John. School Progress in New York City. *National Municipal Review*, July, 1913.

Perry, Clarence Arthur. Vacation Schools. Rec. Ser. No. 56. Russell Sage Foundation. 1914.

(*Open Air Schools*)

Open Air Schools. Russell Sage Foundation: Division of Education. 1913.

International Congress on School Hygiene. Proceedings. Buffalo, 1913.

Warren, Benjamin S. Open Air Schools for the Prevention and Cure of Tuberculosis Among Children. Government Printing Office, Washington. 1912.

Bryant, Louise Stevens. School Feeding: Its History and Practice at Home and Abroad. Lippincott, Philadelphia. 1913.

Dresslar, Fletcher B. The Fifteenth International Congress on Hygiene and Demography, held in Washington, D. C., 1912. Bulletin of the Bureau of Education. Washington, 1913.

Hughes, Harold F. Housing the Overflow. The Fresno Type of Open Air School. *American School Board Journal*, June, 1914.

Ayres, Leonard P. Open-Air Schools. Doubleday, New York. 1910.

Fresh Air Classes for Anemic Children. In Ninth Report of the Committee on the Prevention of Tuberculosis of the Charity Organization Society of the City of New York. 1911-1912-1913.

(*Welfare Work*)

Johnson, Eleanor Hope. Social Service and the Public Schools. *The Survey*, May 3, 1913.

Lewis, William D. Democracy's High School. Houghton, Boston. 1914.

Flexner, Mary. The Visiting Teacher in Action. *The Survey*, May 3, 1913.

(*Evening Schools*)

Perry, Clarence Arthur. Wider Use of the School Plant. Russell Sage Foundation Publications. Charities Publication Committee. New York. 1910.

Martin, John. School Progress in New York City. *National Municipal Review*, July, 1913.

Gilbert, I. B. Evening Classes in the Union High School, Grand Rapids, Michigan. *Vocational Education*, March, 1914.

Mosser, George H. A Vocational Night School with an Enrollment of over 2000. *American City*, January, 1915.

(*School Savings Banks*)

McWilliam, E. G. School Savings Banks and Thrift. *American School Board Journal*, November, 1913.

Holmes, Clay W. The Modern School Savings Plan. *American School Board Journal*, March, 1914.

School Savings Banks. *American Education*. April, 1915.

The United States Commissioner of Education, Report. 1913.

School Board as Banker for Children. *The Survey*, April 18, 1914.

(*Museum Cooperation*)

International Congress on School Hygiene. Proceedings. Buffalo, 1913.

Harrington, John Walker. A New Art in Health Exhibits. *The World's Work*, July, 1913.

Rea, Paul Marshall. Educational Work of American Museums: Museum Cooperation with Public Schools. Report of the United States Commissioner of Education for the year ended June 30, 1913. Vol. I.

Rea, Paul Marshall. Educational Work of American Museums: Traveling School Exhibits. Report of the United States Commissioner of Education, 1913. Vol. I.

Rathmann, Carl G. The Educational Museum of the St. Louis Public Schools. Bulletin of the Bureau of Education, No. 48. Washington, 1914.

(*All-year School*)

Newark All-Year Schools. Fifty-seventh Annual Report of the Board of Education of Newark, New Jersey. 1912-1913. pp. 68-71.

Dana, John Cotton. All-Year Schools. *Independent*, January 16, 1913.

(*Gary*)

Burris, William Paxton. The Public School System of Gary, Indiana. Bulletin of the Bureau of Education. Washington, 1914.

Dorr, Rheta Childe. Keeping the Children in School. Reprinted from *Hampton's Magazine*, July, 1911.

Gibson, David. The Wirt School System. Reprinted from *Common Sense*, June, 1912.

Hendrick, Burton J. Children of the Steel Kings. *McClure's Magazine*, September, 1913.

(*The Complete School in Brooklyn*)

The Reorganization of Public School 89, Brooklyn, New York. A Report made to President Thomas W. Churchill, Board of Education, New York City, by William Wirt, January 19, 1915.

CHAPTER XII

HIGHER EDUCATION

(*General*)

Henderson, C(harles) Hanford. Education and the Larger Life. Houghton, Boston. 1902.

(Junior High Schools)

The Reorganization of Secondary Education: Preliminary Statements by Chairmen of Committees of the Commission of the National Education Association. Bulletin of the Bureau of Education, Washington, 1913.

The United States Commissioner of Education, Report. 1913.

Johnston, Charles Hughes, ed. The Modern High School: Its Administration and Extension. Scribner's, New York. 1914.

Wiles, Ernest P. The Junior High School. *Teacher*, December, 1913.

Mackie, Ransom A. Progressive High School Reorganization. *Education*, March, 1913.

Garfield Junior High School, Richmond, Indiana. Report. 1914-1915.

Monroe, Paul, ed. Principles of Secondary Education. Macmillan, New York. 1914.

(Self-Government)

Lewis, William D. Democracy's High School. Houghton, Boston. 1914.

Garfield Junior High School, Richmond, Indiana. Report. 1914-1915.

Sisson, Edward O. Moral Education in the High School. Reprinted from Principles of Secondary Education, edited by Paul Monroe. Macmillan, New York. 1914.

(Vocational Education)

Leake, A. H. Industrial Education, Its Problems, Methods and Dangers. Boston, 1913.

Monroe, Paul. Industrial Education. Macmillan, New York. 1912.

Leavitt, Frank Mitchell. Some Examples of Industrial Education. Ginn, Boston. 1912.

Prosser, C. A. Progress in Vocational Education. Department of the Interior: Bureau of Education. Chapter X., Vol. 1, 1912.

Evans, A. M. Vocational Education in Wisconsin. Articles prepared for the *Chicago Record-Herald*. 1913. Published by the Commercial Club of Chicago.

Ayres, Leonard P. Some Conditions Affecting Problems of Industrial Education in 78 American School Systems. Russell Sage Foundation: Division of Education. E. 135.

National Society for the Promotion of Industrial Education. Proceedings and Publications.

Nock, Albert J. An Adventure in Industrial Education. *American Magazine*, April, 1914.

Couffer, U. G. The Sewickley, Pennsylvania, Plan. *Journal of Education*, March 5, 1914.

Taylor, Edwin L. The Adaptation of Manual Training to Community Needs. *Manual Training Magazine*, April, 1914.

Snedden, David Samuel. Problem of Vocational Education. Houghton, Boston. 1910.

Weeks, Ruth M. *The People's School: A Study in Vocational Training*. Boston, 1912.

Vocational Education and Vocational Guidance. A Survey and Preliminary Report by a Committee appointed by the Iowa State Teachers' Association. Published by the State Department of Public Instruction, Des Moines, Iowa.

Vocational Education. Report of a Committee of the Commonwealth Club of California. Archibald B. Anderson, State Normal School, San Francisco, Chairman.

(Prevocational Schools)

Leavitt, Frank Mitchell. *Some Examples of Industrial Education.* Ginn, Boston. 1912.

Hanus, P. H. *Beginnings in Industrial Education.* Boston, 1908.

Smith, Z. M. *What the Public Schools of Indiana are Doing in Pre-Vocational Agricultural Work.* Bulletin No. 16, Vocational Series No. 16. State Department of Public Instruction, Indianapolis, Indiana.

Leavitt, Frank Mitchell. *Prevocational Education in the Public Schools.* Houghton, Boston. 1915.

(Industrial Schools)

Leavitt, Frank Mitchell. *Some Examples of Industrial Education.* Ginn, Boston. 1912.

Forbes, George M. *Organization and Administration of Industrial Schools.* *American School Board Journal*, January, 1913.

Munroe, James Phinney. *New Demands in Education.* Doubleday, New York. 1912.

Woolman, Mary Schenck. *The Making of a Trade School.* Whitcomb and Barrows, Boston. 1910.

Massachusetts Independent Vocational Schools in Operation May 1, 1914. The Commonwealth of Massachusetts: Board of Education. Bulletin No. 5. 1914.

Glynn, Frank L. *Trade Schools in the Public-School System.* National Education Association. Proceedings.

Schneider, Herman. *Vocational Schools.* Report to the Board of Estimate and Apportionment Committee on School Inquiry. New York, 1913.

(Vocational High Schools)

Leavitt, Frank Mitchell. *Some Examples of Industrial Education.* Ginn, Boston. 1912.

Snyder, Henry. *A High School that Trains the Hand as well as the Mind.* *American City*, February, 1914.

Flower, B. O. *A Public School that makes for Efficiency.* *American Review of Reviews*, August, 1914.

Nearing, Scott. *Public Schools that are Making Good: High Schools that are a Step in Life.* *Ladies' Home Journal*, May, 1913.

Leavitt, Frank Mitchell. Vocational Purpose in the Manual Training High School, Indianapolis, Indiana. *Vocational Education*, September, 1912.

What We Are Trying To Do. By Thirty-five Teachers of the Washington Irving High School in New York City. *The World's Work*, May, 1913. Hendrick, Burton J. A School for Womanhood. *McClure's Mag.*, May, 1913.

(Coöperative Schools)

Special Features in City School Systems. Bulletin of the Bureau of Education. Washington, 1913.

Leavitt, Frank Mitchell. Some Examples of Industrial Education. Ginn, Boston. 1912.

Leighton, E. V. Public Schools that are not Failures: II. Beverly Independent Industrial School. *Popular Educator*, April, 1913.

McCann, Matthew R. The Fitchburg Plan of Coöperative Industrial Education. Bulletin of the Bureau of Education. Washington, 1913.

Roberts, William M. The Development of Part-Time Education for Apprentices in Chicago. *Vocational Education*, January, 1914.

Roberts, William M. Trade Agreements in Industrial Education of Apprentices in Chicago. National Education Association. Proceedings. 1914.

(Continuation Schools)

Leavitt, Frank Mitchell. Some Examples of Industrial Education. Ginn, Boston. 1912.

Leavitt, Frank Mitchell. The Continuation School: Cincinnati's Examples. *Vocational Education*, January, 1913.

Roberts, Edward D. The Cincinnati Continuation Schools. National Education Association. Proceedings. 1913.

Cooley, R. L. The Apprenticeship and Continuation Schools of Milwaukee, Wisconsin. National Education Association. Proceedings. 1914.

Jones, A. J. The Continuation School in the United States. United States Bureau of Education. Bulletin. Washington, 1907.

(Vocational Guidance)

Bloomfield, Meyer. The Vocational Guidance of Youth. Houghton, Boston. 1911.

Leavitt, Frank Mitchell. Some Examples of Industrial Education. Ginn, Boston. 1912.

Brooklyn. Public Library. Choosing a Vocation. A list of books and references on vocational choice, guidance and training in the Brooklyn Public Library. 1913.

Boston. Vocation Bureau. Bibliography of books and periodicals in English and German, dealing with vocational direction.

Vocational Guidance—Work of the Vocation Bureau of Boston. Vocation Bureau, Boston. 1915.

Bloomfield, Meyer, and Wentworth, Laura F. The Vocational Counselor in Action. *The Survey*, May 3, 1913.

Goodwin, Frank P. Vocational Guidance in Cincinnati. *Vocational Education*, March, 1914.

Giles, F. M. Vocational Guidance in High School. *School Review*, April, 1914.

Ranck, Samuel H. Library Work in Vocational Guidance. *Library Journal*, September, 1914.

Reed, Anna Y. Seattle Children in School and in Industry. Board of School Directors, Seattle, 1915.

Allen, F. J. The Vocation Bureau and the Boston School System. *National Municipal Review*, January, 1913.

Bloomfield, Meyer, ed. Readings in Vocational Guidance. Ginn, Boston. 1915.

Davis, Jesse Buttrick. Vocational and Moral Guidance. Ginn, Boston. 1914.

National Vocational Guidance Association. Proceedings.

(*Junior Colleges*)

Johnston, Charles Hughes, ed. The Modern High School: Its Administration and Extension. Scribner's, New York. 1914.

McLane, C. L. The Junior College or Upward Extension of the High School. *School Review*, March, 1913.

(*Municipal Universities*)

Dabney, Charles William. The Municipal University and Its Work. National Education Association. Proceedings. 1912.

Dabney, Charles William. A Study of the Student Body of the University of Cincinnati: A Municipal Institution. *National Municipal Review*, January, 1914.

Kolbe, P. R. The History of the Municipal University Movement in Akron. Transaction Forty-fourth Annual Meeting Ohio College Association.

An instructive article on the subject of municipal universities appeared as an editorial in the *New York Evening Post*, January 11, 1914.

CHAPTER XIII

PUBLIC LIBRARIES AND MUSEUMS

(*General*)

Bostwick, Arthur Elmore. The American Public Library. Appleton, New York. 1910.

Green, Samuel Swett. The Public Library Movement in the United States, 1853-1893. Boston Book Company, Boston. 1913.

American Library Association, Bulletin. September, 1913.

Ahern, Miss M. E. Library Activities during 1912-1913. Report of the

United States Commissioner of Education for the year ending June 30, 1913. Vol. I, Washington, 1914.

Benton, Josiah H. *The Working of the Boston Public Library*. Boston, 1914.

Comstock, Sarah. *Eight Million Books a Year*. *The World's Work*, May, 1913.

Baldwin, E. V. *Library Service*. American Library Association. 1914.

American Library Association. *Report of the Committee on the Relations of the Public Library to the Municipality*. Reprinted in pamphlet form.

American Library Association. *Proceedings of the Annual Meetings*. *The Library Journal*. R. R. Bowker Company, New York.

Public Libraries. Published by the Library Bureau, Chicago.

League of Library Commissions. *Year Book*. 1912.

Carr, John Foster. *What the Library can do for our Foreign-born*. *Library Journal*, October, 1913.

Campbell, J. Maud. *What the Foreigner has done for One Library*. *Library Journal*, November, 1913.

Rea, Paul Marshall. *Educational Work of American Museums*. Report of the United States Commissioner of Education for the year ended June 30, 1913. Vol. I.

Gilman, Benjamin Ives. *Popular Education in Fine Art in the United States*. Report of the United States Commissioner of Education for the year ended June 30, 1913. Vol. I.

(*Work with Children*)

Olcott, Frances Jenkins. *The Children's Free Library and City Education*. *American City*, March, 1913.

Olcott, F. J. *Library Work with Children*. American Library Association, 1914.

Comstock, Sarah. *New York's Story Lady*. *American Magazine*, February, 1914.

(*Branch Libraries*)

Hunt, Clara Whitehill. *Brooklyn Opens the First Children's Branch*. *Library Journal*, October, 1914.

Dana, John Cotton. *The Public Library and Publicity in Municipal Affairs*. *Library Journal*, April, 1913.

Chicago's Interesting Municipal Motor Service. *The Power Wagon*, June 1, 1914.

(*Municipal Reference Libraries*)

Report to National Municipal League of Committee on Municipal Reference Libraries, November, 1910. National Conference for Good City Government, Buffalo, 1910. *Proceedings*.

Municipal Reference Libraries and Archives. National Municipal League. Minutes of the Seventeenth Annual Meeting, Richmond, 1911. *National Municipal Review*, Vol. 1, sup.

Kaiser, J. B. *Law, Legislative and Municipal Reference Libraries.* Boston Book Company, Boston. 1914.

Crecraft, Earl W. *The Municipal Reference Library.* *National Municipal Review*, October, 1913.

(*School and Library Coöperation*)

Legler, Henry E. *Educational By-Products in Library Work.* National Education Association. *Proceedings.* 1912.

Greenman, Edward D. *United States Bureau of Education Library, Washington, D. C. The Development of Secondary School Libraries.* *Library Journal*, April, 1913.

Bostwick, Arthur Elmore. *The Public Library, the Public School, and the Social Center Movement.* National Education Association. *Proceedings.* 1912.

Bostwick, Arthur Elmore. *Library and School: The Relationship between the Library and the Public Schools.* H. W. Wilson, White Plains, New York, 1914.

Elmendorf, Mrs. H. L. *Buffalo's System of Public School and Public Library Coöperation.* A paper prepared for the New York State Teachers' Association, 1911. Buffalo, 1912.

Hall, M. E. *Vocational Guidance through the Library.* American Library Association, 1914.

Ranck, Samuel H. *Library Work in Vocational Guidance.* *Library Journal*, September, 1914.

Ranck, Samuel H. *The Library and the School in Grand Rapids.* *Library Journal*, April, 1907.

Wood, Harriet A. *The Administration of High School Libraries as Branches of Public Libraries.* *Library Journal*, September, 1914.

Wright, Purd B. *High School Branches in Kansas City.* *Library Journal*, September, 1914.

Package Libraries for the Study of Civics. *Chicago Public Library Book Bulletin.* December, 1914.

(*Publicity and Propaganda*)

Bostwick, Arthur Elmore. *The Public Library, the Public School, and the Social Center Movement.* National Education Association. *Proceedings.* 1912.

Bostwick, Arthur Elmore. *The Social Work of the St. Louis Public Library.* *Library Journal*, September, 1911.

Isom, Mary Frances. *The Library a Civic Center.* *Public Libraries*, March, 1914.

CHAPTER XIV

SOCIAL CENTERS

(*General*)

Ward, Edward J. *The Social Center.* Appleton, New York. 1913.

Perry, Clarence Arthur. *Wider Use of the School Plant.* Russell Sage Foundation Publications. Survey Associates, New York. 1910.

BIBLIOGRAPHY

University of Wisconsin: Bureau of Civic and Social Center Development, Madison, Wisconsin. Bulletins.

City School as a Community Center. Tenth Yearbook of the National Society for the Study of Education. Edited by the secretary, S. Chester Parker, University of Chicago, Chicago, Illinois. 1911.

Hanmer, Lee F., and Knight, Howard R. Sources of Information on Recreation. Russell Sage Foundation: Department of Recreation. No. Rec. 136.

Cleland, Ethel. Social Centers. *National Municipal Review*, January, 1914.

Regulating the Use of Public School Buildings and Grounds in the District of Columbia. United States Senate Report No. 391. March 30, 1914.

Hanmer, Lee F. The Schoolhouse Evening Center. National Education Association. Proceedings. 1914.

Perry, Clarence Arthur. Social Center Development to Date and the Schoolhouse as a Recreation Center. Addresses before the first National Conference on Civic and Social Center Development at Madison, Wisconsin. October 26, 27, 1911. Extension Division. General Information and Welfare Bulletin. University of Wisconsin, 1912.

Perry, Clarence Arthur. Unused Recreational Resources of the Average Community. Russell Sage Foundation. Rec. Ser. No. 104. 1914.

Perry, Clarence Arthur. Social Center Features in New Elementary School Architecture and the Plants of Sixteen Socialized Schools. Russell Sage Foundation: Department of Child Hygiene. Pamphlet No. 120. 1912.

Perry, Clarence Arthur. Community-Used School. Russell Sage Foundation. Rec. Ser. No. 83.

Perry, Clarence Arthur. How to Start Social Centers. Russell Sage Foundation. Pamphlet No. Rec. 125.

Perry, Clarence Arthur. Survey of School Social Centers. Season of 1911-12. Russell Sage Foundation: Department of Recreation. No. R. 123.

Perry, Clarence Arthur. Social Centers of 1912-13. Russell Sage Foundation: Department of Recreation. Pamphlet No. R 135.

Perry, Clarence Arthur. How the Social Center Promotes Reform Movements. Russell Sage Foundation, 1913. Pamphlet No. R 131.

Perry, Clarence Arthur. Real Snag in Social Center Extension. Russell Sage Foundation, 1914. Rec. Ser. No. 137.

Perry, Clarence Arthur. High School as a Social Center. Russell Sage Foundation, 1914. Rec. Ser. No. 138.

Perry, Clarence Arthur. The School as a Factor in Neighborhood Development. Russell Sage Foundation: Department of Recreation. No. Rec. 142.

Grand Rapids Social Centers. Special Features in City School Systems. Bulletin of the Bureau of Education. Washington, 1913.

Marquis, Eva M. The Social Center in Kansas City. Report of the Board of Public Welfare, Kansas City, Missouri. 1913-1914. Also Parent-Teachers' Associations.

(Free Lectures)

Ward, Edward J. *The Social Center*. Appleton, New York. 1913.
Horne, Charles F. *Twenty-five Years of Free Lectures*. *The Outlook*,
May 23, 1914.
Hoyem, Oliver. *Adult Education in New York City*. *National Municipal Review*, October, 1913.

(Chicago School Extension)

Chicago School of Civics and Philanthropy: Extension Department.
Publications.
Board of Education, City of Chicago. Annual Reports.

(Rochester Social Centers)

Ward, Edward J. *The Social Center*. Appleton, New York. 1913.
Weet, Herbert S. *Citizenship and the Evening Use of School Buildings*.
Unity, February 9, 1911. Reprinted from the *Common Good*, Rochester,
New York.
Childs, Harriet Lusk. *Rochester Social Centers*. *American City*, July,
1911.
Extension Division of the University of Wisconsin: General Information
and Welfare. *Lessons Learned in Rochester with reference to Civic
and Social Center Development*. Bulletin No. 464. Published by
the University of Wisconsin, Madison, Wisconsin. November, 1911.

(Art Centers)

Ward, Edward J. *The Social Center*. Appleton, New York. 1913.
Johnston, Ella Bond. *Richmond, Indiana. Chapter on "Art Center" in
The Modern High School: Its Administration and Extension*. Scribner's,
New York. 1914.
An Art Gallery in a School. *The Outlook*, January 3, 1914. Editorial.
Art and the Public Schools. *The Outlook*, January 10, 1914. Editorial.

(Motion Picture Theaters)

Holliday, Carl. *The Motion Picture Teacher*. *The World's Work*, May,
1913.
National Board of Censorship of Motion Pictures. *The Policy and Standards
of the National Board of Censorship of Motion Pictures*. Revised
May, 1914.

(Citizenship Centers)

Ward, Edward J. *The Social Center*. Appleton, New York. 1913.
Pink, Louis Heaton. *Polling Places in the Schools*. *National Municipal Review*, July, 1913.
Instruction in Citizenship. *Municipal Record* (San Francisco), December
10, 1914.

Social Center Pageant: The Schoolhouse as a Polling Place in Wisconsin. *The Survey*, November 14, 1914.

Beck, Carl. Where Shall the Citizens of New York Vote? *The Survey*, April 11, 1914.

Schoolhouses as Polling Places. *American City*, June, 1915.

Ward, E. J. The Schoolhouse as the Polling Place. *Bulletin of the Bureau of Education*. Washington, 1915.

(*Civic Secretaries*)

Ward, Edward J. The Greatest Office in Any Community. *La Follette's*, September 5, 1914.

Democracy in Local Matters. *Municipal Record* (San Francisco), December 10, 1914.

Taylor, Graham. A Community Secretary. *National Municipal Review*, April, 1915.

(*New York's Recreation Centers*)

Ward, Edward J. The Social Center. Appleton, New York. 1913.

Martin, John. School Progress in New York City. *National Municipal Review*, July, 1913.

Self-Government in Public Recreation. (From a memorandum on recreation addressed to the New York Board of Estimate and Apportionment.) *The Survey*, August 23, 1913.

Notes on Community Center Work in School Buildings. Issued by the Social Center Committee of the People's Institute, New York. Pamphlet Number One: Bird's-Eye View; Recreation Centers and Community Centers. 1915.

Notes on Community Center Work in School Buildings. Issued by the Social Center Committee of the People's Institute, New York. Pamphlet Number Two: Self-Government and Self-Support. 1915.

CHAPTER XV

PARKS AND BOULEVARDS

(*General*)

Crawford, Andrew Wright. The Development of Park Systems in American Cities. *The Annals*, March, 1905.

Public Recreation Facilities. *The Annals*, March, 1910.

Nolen, John. The Parks and Recreation Facilities in the United States. *The Annals*, March, 1910.

Kelsey, Frederick Wallace. The First County Park System: A Complete History of the Inception and Development of the Essex County Parks of New Jersey. J. S. Ogilvie Publishing Co., New York. 1905.

Kelsey, Frederick W. Park System of Essex County, New Jersey. *The Annals*, March, 1910.

Muirheid, Walter G. The Park System of Hudson County, New Jersey. *The Annals*, March, 1910.

Crawford, Andrew Wright. Proposed Philadelphia Parkways. *Municipal Journal and Engineer*, May, 1903.

Crawford, Andrew Wright. City Planning and Philadelphia Parks. *The Annals*, March, 1910.

Board of Park Commissioners, Spokane, Wash. Report. 1891-1913.

Kessler, George E. How the Parks and Boulevards of Kansas City are Financed. *American City*, June, 1913.

The Park and Boulevard System of Kansas City. Published by the Board of Park Commissioners, 1914.

Mountain Park System (Denver). *The City of Denver*, July 11, 1914.

President Signs Bills to Increase Denver's Mountain Parks. *The City of Denver*, September 12, 1914.

Brown, Charles N. The Park Movement in Madison, Wisconsin. *The Annals*, March, 1910.

Clark, Will H. How Oklahoma City Secured Its Park and Boulevard System. *American City*, December, 1910.

Park and Cemetery. Monthly. Chicago.

(Chicago Parks and Boulevards)

Perkins, Dwight Heald, comp. Report of the Special Park Commission to the City Council of Chicago on the subject of a Metropolitan Park System. 1904.

South Park Commissioners, Chicago. Annual Reports.

West Chicago Park Commissioners. Annual Reports.

Lincoln Park Commissioners. Annual Reports.

Special Park Commissioners. Annual Reports.

(Baltimore)

Scott, Stuart Stevens. Baltimore, the City of Parks. *Municipal Engineering*, March, 1913.

Making the Parks of Great Practical Service to the Public. *Municipal Journal* (Baltimore), May 15, 1914.

(Washington)

The Improvement of the Park System of the District of Columbia. I. Report of the Senate Committee on the District of Columbia. II. Report of the Park Commission. Edited by Charles Moore. Government Printing Office, Washington. 1902.

(Boston)

Crawford, Andrew Wright. The Development of Park Systems in American Cities. *The Annals*, March, 1905.

Boston's Parkways. *Municipal Journal and Engineer*, August 5, 1908.

de las Casas, William B. The Boston Metropolitan Park System. *The Annals*, March, 1910.

Metropolitan Park Commissioners. Annual Reports.

(Recreation in the Parks)

Merkel, Herman A. The New York Idea of a Zoölogical Park. *American City*, October, 1913.

Seton-Thompson, Ernest. The National Zoo at Washington. *Century*, March and May, 1900.

Nolen, John. The Parks and Recreation Facilities in the United States. *The Annals*, March, 1910.

Groot, E. B. de. Recreation Facilities in Public Parks. *American City*, January, 1914.

(Municipal Forestry)

Solotaroff, William. Shade Trees in Towns and Cities. Wiley, New York. 1911.

Bostwick, Andrew Linn. Municipal Tree Planting by Special Assessment. Laws and Practices in Several States and Cities. *Municipal Journal*, October 29, 1914.

Bannwart, Carl. The Movement for City Street Trees—A Survey. *National Municipal Review*, April, 1915.

The Newark Shade Tree Commission. *The Newarker*, published by the Free Public Library of Newark, New Jersey. June, 1914.

Parker, George A. Street Tree Inventory. *Municipal Journal and Engineer*, April 3, 1907.

Tree Culture in New York. *Municipal Journal and Engineer*, April 3, 1907.

Massachusetts State Forester. Reports.

CHAPTER XVI

PUBLIC RECREATION

(General)

Public Recreation Facilities. *The Annals*, March, 1910.

Nolen, John. The Parks and Recreation Facilities in the United States. *The Annals*, March, 1910.

Braucher, Howard S. Play and Social Progress. *The Annals*, March, 1910.

Curtis, Henry S. Public Provision and Responsibility for Playgrounds. *The Annals*, March, 1910.

Jerome, Mrs. Amalie Hofer. The Playground as a Social Center. *The Annals*, March, 1910.

Robinson, Charles Mulford. Educational Value of Public Recreation Facilities. *The Annals*, March, 1910.

Von Borosini, Victor. Our Recreation Facilities and the Immigrant. *The Annals*, March, 1910.

Mallery, Otto T. The Social Significance of Play. *The Annals*, March, 1910.

Kennard, Beulah. The Playground for Children at Home. *The Annals*, March, 1910.

Marsh, Benjamin C. The Unused Assets of our Public Recreation Facilities. *The Annals*, March, 1910.

Addams, Jane. Recreation as a Public Function in Urban Communities. *The American Journal of Sociology*, March, 1912.

Collier, John. City Planning and the Problem of Recreation. *The Annals*, January, 1914.

Addams, Jane. The Spirit of Youth and the City Streets. Macmillan, New York. 1909.

Edwards, Richard Henry. Public Recreation. Extension Division, University of Wisconsin, Madison, Wisconsin.

Curtis, Henry S. Play and Recreation for the Open Country. Ginn, Boston. 1914.

Perry, Clarence A. Unused Recreational Resources of the Average Community. Russell Sage Foundation. Rec. Ser. No. 104.

Hanmer, Lee F., and Knight, Howard R. Sources of Information on Recreation. Russell Sage Foundation: Department of Recreation No. Rec. 136.

Lee, Joseph. Constructive and Preventive Philanthropy. New York. 1902.

Lee, Joseph. Play in Education. New York. 1915.

The Playground. Published by the Playground and Recreation Association of America, New York City.

Playground Association of America. Proceedings. 1907 to date.

(*The Playground Movement*)

A Brief History of the Playground Movement in America. *The Playground*, 1915.

Lee, Joseph. Playground Committee (Massachusetts Playground Referendum). Annual Report of the Massachusetts Civic League for the year ending October 31, 1910.

Playground Law of 1912 Applicable to Towns of over 5000 Population. (Massachusetts) Chapter 223.

Mero, Everett B. American Playgrounds. 3d ed. New York, 1909.

Perry, Clarence Arthur. Wider Use of the School Plant. Russell Sage Foundation. Survey Associates, New York. 1911.

(*New York Playgrounds*)

Beck, Carl. Play Zones in New York Streets. *The Survey*, September 12, 1914.

Stover, Charles B. Seward Park Playground. *Municipal Journal and Engineer*, May, 1903.

(*Chicago Playgrounds*)

Taylor, Graham Romeyn. Recreation Developments in Chicago Parks. *The Annals*, March, 1910.

South Park Commissioners, Chicago. Annual Reports.

West Chicago Park Commissioners. Annual Reports.

Lincoln Park Commissioners. Annual Reports.
Special Park Commissioners. Annual Reports.
Conserving Chicago's Great Play Estate. *The Survey*, June 12, 1915.

(*Los Angeles Playgrounds*)

Stoddart, Besseie D. Recreative Centers of Los Angeles, California. *The Annals*, March, 1910.
Board of Playground Commissioners of the City of Los Angeles. Reports.

(*Public Baths*)

Erler, Richard W. Newark's New Bath House. *Municipal Journal*, January 29, 1914.
Hanmer, Lee F., and Knight, Howard R. Sources of Information on Recreation. Russell Sage Foundation: Department of Recreation. No. Rec. 136.
Gerhard, William Paul. Modern Baths and Bath Houses. Wiley, New York. 1908.
Beadenkoff, T. M. Portable Shower Baths. *The Survey*, July 31, 1909.
Free Public Bath Commission of the City of Baltimore. Annual Reports.
Gerhard, William Paul. Public Bath Houses and Swimming Pools. *American City* Pamphlet No. 120.

(*Boston Public Baths*)

Woodbury, William R., M.D. Boston's Municipal Gymnasiums. *The Commons*, October, 1904.
Cole, William I. Free Municipal Baths in Boston. Department of Baths, Boston, Massachusetts.
Department of Parks and Recreation, Boston, Massachusetts. Annual Reports.
Metropolitan Park Commission, Boston, Massachusetts. Annual Reports.

(*New York Public Baths*)

New York City. Health Department. Public Baths in New York City, with special reference to river bathing. *Monthly Bulletin*, May, 1914.
Armstrong, Donald B., M.D. Public Bath Advertising Campaign. *The Survey*, February 21, 1914.
Purifying Water for City Bathing Pools. *The Survey*, May 9, 1914.
New York City's Public Baths. *Municipal Journal*, May 20, 1915.

(*Vacation Camps*)

Board of Playground Commissioners of the City of Los Angeles. Report for the years 1913-1914.
Municipal Vacation Camp for Los Angeles in San Bernardino Mountains. *The Survey*, May 9, 1914.
A City that has a Vacation Camp. *La Follette's*, July 11, 1914.

(Municipal Dancing)

Chicago, Illinois. Municipal Reference Library. *Municipal Dance Halls.* Municipal Reference Bulletin No. 2. March, 1914.

Cleveland, Ohio. Dance Hall Inspector. Report of regulation of the city's dance halls for the year ending December 31, 1913.

Rex, Frederick. *Municipal Dance Halls.* *National Municipal Review*, July, 1915.

The Street as a Dance Hall. *American City*, November, 1914. Items of Municipal and Civic Progress.

(Municipal Music)

Free Organ Recitals. *Pittsburgh Chronicle Telegraph*, February 3, 1914.

Simpson, S. H. J. Municipal Music in New York. *The Survey*, April 19, 1913.

Earhart, Will. Music in the Public Schools. Bulletin of the Bureau of Education. No. 33. Washington. 1914.

(Municipal Auditoriums)

Financial Statistics of Cities: 1911. Department of Commerce: Bureau of the Census.

San Francisco's Municipal Auditorium. *San Francisco Chronicle*, January 16, 1915.

A Municipal Theater and Concert Hall. *American City*, May, 1910.

(Municipal Theaters)

Denver, Colorado, Public Library. References on Municipal Theaters.

A Municipal Theater in Oklahoma. *Kansas City Times*, December 12, 1914.

Municipal Movie on the Move. *The Survey*, October 31, 1914.

Town That Owns Its Own Theater. *The Craftsman*, January, 1913.

A Municipal Theater. *The Outlook*, December 21, 1912.

America's First Municipal Theater: Northampton's Experiment. *Boston Transcript*, October 19, 1912.

Pierce, L. France. The First Municipal Theater in America. *The World To-day*, June, 1905.

Municipal Theaters in Wisconsin. *National Municipal Review*, January, 1914. Notes and Events.

(Festivals and Pageants)

MacKaye, Percy. The Civic Theater in Relation to the Redemption of Leisure. Kennerley, New York. 1912.

Chubb, Percival, and Associates. Festivals and Plays. Harper, New York. 1912.

Davol, Ralph. A Handbook on American Pageantry. Davol Publishing Co., Taunton, Mass. 1914.

Hanmer, Lee F., and Knight, Howard R. Sources of Information on Recreation. Russell Sage Foundation: Department of Recreation. No. Rec. 136.

MacKaye, Percy. St. Louis: A Civic Masque. Doubleday, New York. 1914.

The Civic Pageant of Arlington, Massachusetts. To Commemorate the Dedication of the Town Hall. Written and planned by Mrs. Cyrus Edwin Dallin. Arlington, Massachusetts. 1913.

The Easter Rubidoux Pilgrimage. *The Outlook*, April 21, 1915.

The Night Before Christmas in the City Square. *The Survey*, December 5, 1914.

Hanmer, Lee F. Independence Day Legislation and Celebration Suggestions. Russell Sage Foundation: Department of Recreation. No. Rec. 129.

American Pageant Association. Bulletins. Contain lists of the pageants, festivals, and masques that are given each year, and also furnish advance notices of such performances. The Association publishes descriptive bulletins for the use of the general public, mainly educational in character, as well as detailed information concerning the production of performances for the use of those who are actively engaged in the work.

CHAPTER XVII

CITY PLANNING

(General)

United States. Library of Congress. Division of Bibliography. Check List of References on City Planning. 1912.

New York City. Public Library. Select list of works relating to city planning and allied topics. 1913.

Boston. Public Library. City and town planning bibliography. In *Bulletin*, 3d series, June, 1910.

New York School of Philanthropy. Social aspects of town planning. In *Public Sociological Library Bulletin*, No. 5, March, 1912. New York, 1912.

Nolen, John. Town-Planning Library. *The Annals*, January, 1914.

Marsh, B. C., and Ford, G. B. Introduction to City Planning: Democracy's Challenge to the American City; with a chapter on the technical phases of city planning, by G. B. Ford. New York, 1909.

Nolen, John. Replanning Small Cities: Six Typical Studies. Huebsch, New York. 1912.

Handbook of City Planning, edited by John Nolen. National Municipal League Series. Philadelphia, 1915.

Robinson, Charles Mulford. The Improvement of Towns and Cities. 4th and rev. ed. Putnam's, New York. 1914.

Robinson, Charles Mulford. Modern Civic Art. Putnam's, New York. 1903.

Koester, Frank. *Modern City Planning and Maintenance*. McBride, Nast & Co., New York.

Housing and Town Planning. *The Annals*, January, 1914.

Olmsted, Frederick Law. *The Town-Planning Movement in America*. *The Annals*, January, 1914.

National Conference on City Planning. *Proceedings*. 1909 to date.

Burnap, George. *Park Design in City Planning*. *American City*, June, 1915.

Tomkins, Calvin. *The Water Front and the City Plan*. *The Annals*, January, 1914.

Miller, Leslie W. *River-Front Embankments*. *The Annals*, January, 1914.

Pattison, Alice M., ed. *Handbook of Art*. 2d ed. Prepared and printed by the General Federation of Women's Clubs. 1908.

Newark, New Jersey. Free Public Library. *Municipal Art*. A few of the best books and magazine articles on the subject. Newark, 1907.

Boston Public Library. *Catalogue of books relating to architecture, construction and decoration*. 2d edition with an additional section on city planning. Boston, 1914.

Olmsted, Frederick Law. *How to Organize a City Planning Campaign*. *American City* Pamphlet No. 102.

(Business)

National Conference on City Planning. *Proceedings*. 1914.

Shurtleff, Flavel, in collaboration with Frederick Law Olmsted. *Carrying Out the City Plan*. Russell Sage Foundation Publication. Survey Associates, New York. 1914.

Report of the Heights of Buildings Commission to the Committee on the Height, Size and Arrangement of Buildings of the Board of Estimate and Apportionment of the City of New York. December 23, 1913.

Minneapolis Civic and Commerce Association. *Report of municipal committee on limitation of heights of buildings*.

Ford, George B. *Chambers of Commerce and City Planning*. *American City* Pamphlet No. 115.

A New Factor in the Vitalizing of Commercial and Civic Organizations. *American City*, May, 1913. Editorial.

Factory Site Commission. *Municipal Journal* (Baltimore), May 7, 1915.

Bennett, E. H. *Planning for Distribution of Industries*. *The Annals*, January, 1914.

Pratt, Edward Ewing. *Industrial Causes of Congestion of Population in New York City*. Columbia University, New York. 1911. Statistical tables.

(Communication)

Robinson, C. M. *Street Plan of a City's Business District*. *Architectural Record*, March, 1903.

Robinson, Charles Mulford. *Width and Arrangement of Streets*. McGraw, New York. 1911.

Haldeman, B. Antrim. The Street Layout. *The Annals*, January, 1914.

Robinson, Charles Mulford. The Sociology of a Street Layout. *The Annals*, January, 1914.

Shirley, Joseph W. The Value of a Topographical Survey in Planning a Street System. *American City*, June, 1915.

Blachly, Frederick F. The Streets of New York City. *National Municipal Review*, October, 1913.

Chicago, Illinois. Chicago Plan Commission. Analysis and digest of the reports of the executive officers and the architectural and engineering staff of the Chicago Plan Commission, of Mr. John F. Wallace and of Mr. Bion J. Arnold, to the Committee on Railway Terminals of the City Council of Chicago, November 25, 1913.

Lewis, N. P., and others. Circulation of Passengers and Freight in its Relation to the City Plan. Second National Conference on City Planning and the Problems of Congestion. Proceedings. 1910.

Maltbie, M. R. Transportation and City Planning. Fifth National Conference on City Planning. Proceedings. 1913.

(*City Halls*)

Blake, W. B. A City With a \$2,000,000 Trade-Mark. *Collier's*, April 4, 1914.

Pell and Corbett, Architects. Municipal Buildings. Springfield, Massachusetts. *Architecture and Building*, December, 1913.

Bakewell and Brown, Architects. The New City Hall of San Francisco. *Municipal Engineering*, November, 1913.

(*Library and Museum Buildings*)

Bostwick, Arthur Elsmore. The American Public Library. Appleton, New York. 1910.

Soule, Charles C. How to Plan a Library Building for Library Work. 1912.

Hunt, Clara Whitehill. Brooklyn Opens the First Children's Branch. *Library Journal*, October, 1914.

The Minneapolis Museum of Fine Arts. *The Outlook*, January 20, 1915. Editorial.

(*Schoolhouses*)

Burrage, Severance, and Bailey, Henry Turner. School Sanitation and Decoration. Heath, Boston. 1899.

Dresslar, F. B. American School Houses. Washington, 1911.

Dresslar, Fletcher Bascom. School Hygiene. Macmillan, New York. 1913.

Fourth International Congress on School Hygiene. Proceedings. Buffalo, 1913.

Fire Protection in Public Schools. Russell Sage Foundation: Division of Education. Pamphlet No. E 132.

Johnston, Charles Hughes, ed. The Modern High School: Its Administration and Extension. Scribner's, New York. 1914.

Perkins, Dwight Heald. *The Relation of Schoolhouse Architecture to the Social Center Movement*. National Education Association. Proceedings. 1912.

Perry, Clarence A. *Social Center Features in New Elementary School Architecture*. Russell Sage Foundation: Department of Child Hygiene. Pamphlet No. 120. 1912.

Keene, Charles H. *The Effect of Conditions of Schoolroom Heating and Ventilating on Schoolroom Attendance*. *School Review*, January, 1914.

Hull, W. R. *New Features in a Manual Arts School*. *Manual Training*, February, 1914.

Report of the Superintendent of School Buildings. In the Annual Report of the Board of Education of the City of New York for the year 1913.

Snyder, C. J. B. *The Washington Irving High School*. *Architecture and Building*, May, 1913.

Ittner, William B. *School Buildings of Saint Louis, Missouri*. *American Architect*, September 16, 30, 1914.

Briggs, W. R. *Modern American School Buildings*. New York, 1909.

Wheelwright, E. M. *School Architecture*. Boston, 1901.

(Civic Centers)

Warner, John De Witt. *Civic Centers*. *Municipal Affairs*, March, 1902.

Hurd, Richard M. *The Structure of Cities*. *Municipal Affairs*, March, 1902.

Crawford, Andrew Wright. *The Development of Park Systems in American Cities*. *The Annals*, March, 1905.

San Francisco's Civic Center. *San Francisco Chronicle*, January 16, 1915.

Development and Present Status of City Planning in New York City. Report of the Committee on the City Plan of the Board of Estimate and Apportionment, City of New York. 1914.

Lord, George Bate. *The Civic Center of Des Moines*. *Municipal Engineering*, March, 1913.

(Residential Areas)

National Conference on City Planning. *Proceedings*. 1914.

Shurtleff, Flavel, in collaboration with Frederick Law Olmsted. *Carrying Out the City Plan*. Russell Sage Foundation Publications. Survey Associates, New York. 1914.

(Billboards)

Shurtleff, Flavel, in collaboration with Frederick Law Olmsted. *Carrying Out the City Plan*. Russell Sage Foundation Publications. Survey Associates, New York. 1914.

Billboard Advertising in St. Louis. *The Civic League of St. Louis*, 1910.

Woodruff, Clinton Rogers, ed. *The Billboard Nuisance*. American Civic Association pamphlet.

Regulation of Billboards in Denver. *National Municipal Review*, October, 1914. Notes and Events.

Millard, Everett L. Victory Against Billboards in Illinois. *The Survey*, February 13, 1915.

Cleveland. An ordinance to regulate the construction, location and maintenance of billboards in the City of Cleveland. In *City Record*, July 15, 1914.

Denver, Colorado. An ordinance regulating the construction, erection and maintenance of billboards and other signs and structures in the City of Denver. April 16, 1914.

Report of The Mayor's Billboard Advertising Commission of the City of New York. August 1, 1913.

(*Recreation*)

Collier, John. City Planning and the Problem of Recreation. *The Annals*, January, 1914.

(*Typical City Plans*)

Crawford, Andrew Wright. The Development of Park Systems in American Cities. *The Annals*, March, 1905.

Taft, William Howard. Washington: Its Beginning, Its Growth, and Its Future. *The National Geographic Magazine*, March, 1915.

Development and Present Status of City Planning in New York City. Report of the Committee on the City Plan of the Board of Estimate and Apportionment, City of New York. 1914.

Burnham, Daniel Hudson, and Bennett, Edward H. Plan of Chicago. Prepared under the direction of the Commercial Club during the years 1906, 1907 and 1908. Edited by Charles Moore, Chicago. The Commercial Club. 1909.

National Conference on City Planning. Proceedings. 1909 to date.

(*Municipal Art Commissions*)

Conference of Members of Art Commissions. Art Commissions; city and state; suggestions as to their organization and scope. Report of a committee appointed at the conference of members of art commissions, December, 1913.

Art Commission of the City of New York. Laws relating to art commissions. May, 1914.

English, H. D. W. The Pittsburgh Civic Commission. *National Municipal Review*, January, 1915.

(*City Surveys*)

Social Survey: A Bibliography. Published by the Russell Sage Foundation: Department of Surveys and Exhibits.

Topeka Improvement Survey. Published by the Survey Committee, Topeka, Kansas, 1913.

Kellogg, Paul Underwood, ed. The Pittsburgh District: Civic Frontage. The Pittsburgh Survey. Russell Sage Foundation Publications. Survey Associates, New York. 1914.

Hanmer, Lee F., and Knight, Howard R. Sources of Information on Recreation. (Recreation) Surveys. Russell Sage Foundation: Department of Recreation. No. Rec. 136.

Lawrence, Mass. White Fund Trustees. The Report of the Lawrence Survey. Lawrence, 1911.

Lowell, Mass. Kennett, G. F. The Record of a City: A Social Survey of Lowell, Mass. New York, 1912.

(*City Plan Commissions*)

National Conference on City Planning. Proceedings. 1914.

A List of City-Planning Reports. *American City* Pamphlet No. 124.

Goodrich, E. P., and Ford, George B. Report of Suggested Plan of Procedure, submitted for use of the City Plan Commission of Jersey City, New Jersey. May 1, 1913.

Goodrich, E. P., and Ford, George B. Report to City Plan Commission of Newark, New Jersey. 1912.

(*City Plans Paying for Themselves*)

Shurtleff, Flavel, in collaboration with Frederick Law Olmsted. Carrying Out the City Plan. Russell Sage Foundation Publication. Survey Associates, New York. 1914.

Shurtleff, Flavel. City-Planning Legislation. *The Annals*, January, 1914.

Lewis, Nelson P. Financing a City Plan. *The Annals*, January, 1914.

Newark, New Jersey. Free Public Library. Excess condemnation. A selected list of references. In *The Newarker*, May, 1912.

How New York City Converts Private Property to Public Use. *Real Estate Bulletin*, Real Estate Board, New York City. December, 1914.

Ford, George B. City Planning and Real Estate. *American City* Pamphlet No. 127.

Williams, Frank Backus. City Planning Restrictions on Private Property: Eminent Domain and the Police Power; establishment of the plan on a legal basis; excess condemnation; replanning of streets; renovation of slums. *American City*, June, 1915.

Hurd, R. M. Principles of City Land Values. 2d ed. New York, 1905.

Binkerd, R. S. Excess Condemnation. *National Municipal Review*, January, 1913.

Kessler, G. E. Actual Distribution of the Cost of Kansas City Parks and Boulevards. Fifth National Conference on City Planning. Proceedings. 1913.

Lewis, N. P. Paying the Bills for City Planning. Fourth National Conference on City Planning. Proceedings. 1912.

Marsh, B. C. Taxation of Land Values in American Cities; the next step in exterminating poverty. New York, 1911.

Purdy, Lawson. Condemnation, Assessments and Taxation in Relation to City Planning. Third National Conference on City Planning. Proceedings. 1911.

CHAPTER XVIII

MUNICIPAL OWNERSHIP

(General)

National Convention upon Municipal Operation and Public Franchises. Proceedings. *Municipal Affairs*, 1902-1903.

Bemis, Edward W., ed. *Municipal Monopolies*. Crowell, New York. 4th ed. 1904.

Control of Municipal Public Service Corporations. *The Annals*, May, 1908. Contains fourteen papers on various phases of the subject.

Wilcox, Delos Franklin. *Municipal Franchises*. 2 vols. Engineering News New York. 1912.

King, Clyde Lyndon, ed. *Regulation of Municipal Utilities*. Appleton, New York. 1912.

King, Clyde Lyndon ed. *Municipal Ownership in California through Public Utility Districts*. *National Municipal Review*, January, 1914. Notes and Events.

Wilcox, Delos Franklin. Effects of State Regulation upon the Municipal Ownership Movement. *The Annals*, May, 1914.

Baker, Newton D. *Municipal Ownership*. *The Annals*, January, 1915.

Rosecrantz, Clarke M. Some Limitations and Objections to Municipal Ownership. *The Annals*, January, 1915.

Crosser, Robert. Why I Believe in Municipal Ownership. *The Annals*, January, 1915.

Baskerville, G. B., Jr. A Combination of Municipal and Privately Owned Utilities. Reprinted from *American City*. No. 123.

Cooley, Richard W. *Handbook on the Law of Municipal Corporations*. West, St. Paul.

Howe, Frederic C. *The City, the Hope of Democracy*. Scribner's, New York. 1905.

Detroit, Michigan, Public Library. *Municipal Ownership; selected bibliography*. 1914.

Morgan, Joy E., and Bullock, Edna D., comp. *Selected Articles on Municipal Ownership*. H. W. Wilson, White Plains. 1914.

Francisco, M. J. *Municipal Ownership: Its Fallacy*, with legal and editorial opinions, tables and cost of light as furnished by private companies and municipal plants. 4th ed. Rutland (Vt.), 1895.

Porter, Robert P. *The Dangers of Municipal Ownership*. Century, New York. 1907.

Concerning Municipal Ownership. The Municipal Ownership Publishing Bureau, New York. March, 1906 to date.

National Civic Association. Commission on Public Ownership and Operation. Reports. 1907 to date.

Pond, Oscar L. *A Treatise on the Law of Public Utilities Operating in Cities and Towns*. Bobbs-Merrill, Indianapolis. 1913.

(Street Railways)

United States Library of Congress. Division of Bibliography. Select list of references on municipal ownership and operation of street railways. Washington, 1912.

Bemis, Edward W. Detroit's Efforts to Own Her Street Railways. *Municipal Affairs*, September, 1899.

Myers, Gustavus. History of Public Franchises in New York City: Street Railways and Rapid Transit. *Municipal Affairs*, March, 1900.

Gaynor, William J. New York's Subway Policy. *Municipal Affairs*, June, 1901.

Shepard, Edward M. City Owning and Leasing. *Municipal Affairs*, Winter, 1902-1903.

Municipal Ownership and Municipal Franchises. *The Annals*, January, 1906.

Wright, Henry C. Development of Transit Control in New York City. *The Annals*, May, 1908.

Beal, B. L. Boston Municipal Subway. *Municipal Affairs*, March, 1900.

Winslow, Willard. Boston's New Subway. *Municipal Affairs*, June, 1901.

Brandeis, Louis D. The Experience of Massachusetts in Street Railways. *Municipal Affairs*, Winter, 1902-1903.

Municipal Ownership and Municipal Franchises. *The Annals*, January, 1906.

(Lighting)

Municipal Electric Lighting { Pro . . . Victor Rosewater.
 Con . . . James Blake Cahoon.
Municipal Affairs, Winter, 1902-1903.

Municipal Gas Lighting { Pro . . . Alton D. Adams.
 Con . . . Walter S. Allen.
Municipal Affairs, Winter, 1902-1903.

Municipal Electric Lighting in Chicago . . . Editorial
 Accountants' Report . . . Haskins and Sells.
 Economic and Social Factors . . . John R. Commons.
Municipal Affairs, March, 1902.

Richards, J. L. The Boston Consolidated Gas Company: Its Relation to the Public, Its Employees, and Investors. *The Annals*, May, 1908.

Palmer, Ray. Municipal Lighting Rates. *The Annals*, January, 1915.

Koiner, C. Wellington. Pasadena's Municipal Light and Power Plant. *The Annals*, January, 1915.

Winchester, Albert E. South Norwalk's Municipal Electric Works. *The Annals*, January, 1915.

(Water Works)

Myers, Gustavus. History of Public Franchises in New York City: Water Supply. *Municipal Affairs*, March, 1900.

Baker, M. N. Water Supply of Greater New York. *Municipal Affairs*, September, 1900.

Baker, M. N. Municipal Ownership and Operation of Water Works. *The Annals*, January, 1915.

Burgess, Philip. Points of Difference in Water Works Franchises. Reprinted from *American City*. No. 129.

(*Municipal Heating Plants*)

Talbot, C. H. Municipal Heating Plants. *National Municipal Review*, April, 1914. Notes and Events.

Hopwood, E. C. The Baker Administration of Cleveland. *National Municipal Review*, July, 1913.

Ballard, Frederick W. District Steam Heating with High Pressure Steam. *Journal of the Ohio Society of Mechanical Electrical and Steam Engineers*. Vol. 5, No. 2.

(*Municipal Garages*)

How the City Handles Its Automobiles. *Municipal Journal* (Baltimore), March 5, 1915.

Los Angeles a Leader in Municipal Power Wagons: Los Angeles Municipal Garage. *The Power Wagon*, June 1, 1914.

(*General Municipal Trading*)

Financial Statistics of Cities: 1911. Department of Commerce: Bureau of the Census. Special Report.

Municipal Oil Pit (Pasadena). Final Report of the Mayor to the City Council of Pasadena, 1913.

Municipal Coal and Wood Yard (Denver). Report of the Social Welfare Department, City and County of Denver, for the year ending December 31, 1914.

Wentworth, Jeanie W. A Report on Municipal and Government Ice Plants in the United States and Other Countries. December 15, 1913.

A Municipal Ice Plant: Municipal and Government Ice Plants. *Municipal Engineering*, May, 1914.

Municipal Asphalt Plants. *Municipal Journal and Engineer*, March 3, 1909.

Goodsell, Daniel B. Municipal Asphalt Plant of Manhattan Borough. *Municipal Journal*, March 5, 1914.

CHAPTER XIX

MUNICIPAL ADMINISTRATION

(*General*)

Efficiency in City Government. *The Annals*, May, 1912.

Twenty-eight articles by authorities, grouped under the following general heads: The Need for Efficiency in Municipal Government; Efficiency Principles Applied; Bureaus of Municipal Research; Training for Municipal Efficiency.

National Conferences for Good City Government. Proceedings. 1894-1914 (inclusive). Published by the National Municipal League, Philadelphia.

Fairlie, John A. *Municipal Administration*. Macmillan, New York. 1901.

Parsons, Frank. *The City for the People: or The Municipalization of the City Government and of Local Franchises*. C. F. Taylor, Philadelphia. Revised. 1901.

Steffens, Lincoln. *The Shame of the Cities*. McClure, New York. 1904.

Steffens, Lincoln. *The Struggle for Self-Government*. McClure, New York. 1906.

Steffens, Lincoln. *Upbuilders*. Doubleday, New York. 1909.

Deming, Horace E. *The Government of American Cities*. Putnam's, New York. 1909.

Goodnow, Frank J. *Municipal Government*. Century, New York. 1909.

Fairlie, John A. *Essays in Municipal Administration*. Macmillan, New York. 1910.

Rowe, Leo S. *Problems of City Government*. Appleton, New York. 1908.

Beard, Charles Austin. *American City Government: A Survey of Newer Tendencies*. Century, New York. 1912.

Johnson, Tom Loftin. *My Story*. Edited by Elizabeth J. Hauser. Huebsch, New York. 1911.

Bruère, Henry. *The New City Government*. Appleton, New York. 1912.

Munro, William Bennett. *The Government of American Cities*. Macmillan, New York. 1913.

Whitlock, Brand. *Forty Years of It*. Appleton, New York. 1914.

Howe, Frederic C. *The Modern City and Its Problems*. Scribner's, New York. 1915.

The Nineteen Local Governments in Chicago: A Multiplicity of Overlapping Taxing Bodies with Many Elective Officials. Report prepared by the Chicago Bureau of Public Efficiency. 2d ed. March, 1915.

Merriam, C. E. *Primary Elections: A Study of the History and Tendencies of Primary Election Legislation*. 2d ed. Chicago, 1909.

National Municipal Review. Published by the National Municipal League, Philadelphia.

Each issue of the *Review* contains a list of current references on subjects dealing with municipal government. Edited by Miss Adelaide R. Hasse, chief of the Division of Documents, New York Public Library.

The American City. Published monthly at 87 Nassau Street, New York.

(Charters)

Hatton, A. R. *A Digest of City Charters*. Printed for the Chicago Charter Convention, Chicago. 1906.

Schaffner, Margaret A. *Municipal Home Rule Charters*. Wisconsin Library Commission. Legislative Reference Bulletin No. 18. October, 1908.

Bruère, Henry. *The New City Government*. Appleton, New York. 1912.

Gilbertson, H. S. *The Making of a City Charter*. *American City*, June, 1913.

Matthews, Nathan. *Municipal Charters: A Discussion of the Essentials of a City Charter with Forms or Models for Adoption*. Harvard University Press, Cambridge. 1914.

James, Herman G. *Applied City Government*. Harper, New York. 1914.

Baldwin, Roger N. *Saint Louis' Successful Fight for a Modern Charter*. *National Municipal Review*, October, 1914.

Fesler, Mayo. *Charter-Making in Ohio*. *National Municipal Review*, July, 1913.

Taylor, Charles Fremont. *Checks on Concentration in Modern Charters*. *National Municipal Review*, January, 1915.

Howe, Frederic C. *The Modern City and Its Problems*. Scribner's, New York. 1915.

Thompson, Carl D. *The Vital Points in Charter Making from a Socialist Point of View*. *National Municipal Review*, July, 1913.

National Municipal Review. The *Review* contains a department entitled "Notes and Events," under which all the new developments in city charter-making are recorded.

(Commission Government)

Hamilton, John J. *The Dethronement of the City Boss*. Funk and Wagnalls, New York. 1910.

Woodruff, Clinton Rogers, *ed.* *City Government by Commission*. Appleton, New York. 1911.

Childs, Richard S. *Short Ballot Principles*. Houghton, Boston. 1911.

Bradford, Ernest Smith. *Commission Government in American Cities*. Macmillan, New York. 1911.

Ryan, Oswald. *The Real Problem of Commission Government*. *Pop. Sci. Monthly*, September, 1912.

Lytton, E. C., *comp.* *The Des Moines Plan of Commission Government, Digest and References*. Des Moines, 1912.

Rudisill, G. F., *ed.* *The "Commission Plan."* Federal Printing Co., Columbus. 1913.

Kansas City, Missouri, Public Library. A reading list on commission government. November, 1913.

United States. Library of Congress. Division of Bibliography. Select list of references on commission government for cities. Compiled under the direction of Herman H. B. Meyer, chief bibliographer. Washington, 1913.

On Commission Government for Newark and Commission Government in General. *The Newarker*, published by the Free Public Library of the City of Newark, New Jersey. May, 1914. Contains bibliography.

The Commission Plan and Commission-Manager Plan of Municipal Government: An analytical study by a committee of the National Municipal League. Philadelphia. June, 1914.

Commission and City-Manager Cities. List of Short Ballot Cities. *Municipal Journal*, May 20, 1915.

Ryan, Oswald. Municipal Freedom. Doubleday, New York. 1915.

Bruère, Henry. The New City Government. Appleton, New York. 1912.

Hamilton, John J. Government by Commission. Funk and Wagnalls, New York. 1911.

MacGregor, Ford H. City Government by Commission. The University of Wisconsin. Bulletin No. 423. 1911.

Commission Government and the City-Manager Plan. 2d edition of volume entitled "Commission Government in American Cities" (November, 1911). *The Annals*, 1914. Authoritative articles grouped under the following general heads: Underlying Principles and Typical Plans; Problems of Commission Government; The City-Manager Plan; Results of Commission Government in Typical Cities.

Thompson, Carl D. The Vital Points in Charter Making from a Socialist Point of View. *National Municipal Review*. July, 1913.

Beard, Charles Austin. The Loose-Leaf Digest of Short Ballot Charters. The Short Ballot Organization. New York, 1911.

The Short Ballot Bulletin. The National Short Ballot Organization. New York, New York.

(City Manager)

The Coming of the City Manager Plan. A report of the National Municipal League's committee on the commission form of government and a supplement to its report that appeared in the *National Municipal Review* for January, 1912. *National Municipal Review*, January, 1914.

Dayton's Manager Reports. *National Municipal Review*, October, 1914.

The Report of the City of Dayton, January 1-June 30, 1914, submitted to the city commissioners by the city manager August 1, 1914. Published by the Bureau of Municipal Research, Dayton.

List of references on city manager plan. Municipal League of Los Angeles, California. *Municipal League Bulletin*. June-July, 1914.

The City Manager Plan in Forty-five Cities. *American City*, June, 1915.

Childs, Richard S. The Theory of the New Controlled Executive Plan. *National Municipal Review*, January, 1913.

(Initiative, Referendum and Recall)

The Recall. *Municipal Affairs*, May, 1909. Published by the Municipal League of Los Angeles.

Oberholtzer, Ellis Paxson. The Referendum, Initiative and Recall in America. Scribner's, New York. 1911.

United States. Library of Congress. Division of Bibliography. Select list of references on initiative, referendum and recall. Compiled by H. H. B. Meyer, chief bibliographer. Washington, 1911.

The Initiative, Referendum and Recall. *The Annals*, September, 1912.

Eighteen articles grouped under the following general heads: *Merits and Limitations of the Initiative, Referendum and Recall; Provisions for and Results Obtained by the Initiative, Referendum and Recall; The Judicial Recall.*

Gilbertson, H. S. *The Recall—Its Provisions and Significance.* *The Annals*, September, 1912.

Catlett, Fred W. *The Working of the Recall in Seattle.* *The Annals*, September, 1912.

Phelps, E. M., *ed.* *Selected Articles on the Initiative and Referendum.* 2d and enl. ed. H. W. Wilson, White Plains. 1911.

Munro, William Bennett. *The Initiative, Referendum and Recall.* Appleton, New York. 1912.

Wilcox, Delos Franklin. *Government by All the People.* Macmillan, New York. 1912.

Taylor, Charles F. *Municipal Initiative, Referendum and Recall in Practice.* *National Municipal Review*, October, 1914.

Equity. *The Initiative, Referendum and Recall Department.* January, 1915.

(*Preferential Voting*)

Bacon, Edwin M., and Wyman, Morrill. *Direct Elections and Law-Making by Popular Vote; the Initiative, the Referendum, the Recall, Commission Government for Cities, Preferential Voting.* Houghton, Boston. 1912.

Johnson, Lewis Jerome. *The Preferential Ballot.* Senate Doc. 985. Washington, D. C., 1915.

Detroit, Michigan, Public Library. *Preferential voting. Selected bibliography.* 1914.

Porter, M. P. *Preferential Voting and the Rule of the Majority.* *National Municipal Review*, July, 1914.

(*Proportional Representation*)

Hoag, C. G. *Effective Voting or "Preferential Voting" and "Proportional Representation."* American Proportional Representation League Pamphlet No. 3. July, 1913.

Proportional Representation Review. Published by the American Proportional Representation League, Haverford, Pennsylvania.

(*Equal Suffrage*)

Brookings, W. Du B., and Ringwalt, R. C., *eds.* *Briefs for Debate on Current Political, Economic, and Social Topics.* New York, 1911.

Franklin, Margaret L., *comp.* *The Case for Woman Suffrage: A Bibliography.* With an Introduction by M. Carey Thomas. New York, 1913.

Phelps, Edith M., *comp.* *Selected Articles on Woman Suffrage.* Minneapolis, 1910.

(Public Schools)

Rollins, Frank. School Administration in Municipal Government. Columbia University Contributions to Philosophy, Psychology and Education. Macmillan, New York. 1902.

Dutton, S. T., and Snedden, D. The Administration of Public Education in the United States. Macmillan, New York. 1912.

Perry, A. C. Outlines of School Administration. Macmillan, New York. 1912.

Johnston, Charles Hughes, ed. The Modern High School: Its Administration and Extension. Scribner's, New York. 1914.

Updegraff, Harlan. A Study of Expenses of City School Systems. United States Bureau of Education Bulletin No. 5. Washington, 1912.

Bostwick, Andrew Linn, comp. School boards: methods of choosing members, term of office, number and qualifications. St. Louis Municipal Reference Library. November, 1913. Typewritten.

A Comparative Study of Public School Systems in the Forty-eight States. Russell Sage Foundation: Division of Education. No. E 124.

Hanus, P. H. School Efficiency. Yonkers-on-Hudson, 1914.

(Public Libraries)

Ranck, Samuel H. The Library and the School in Grand Rapids. *Library Journal*, April, 1907.

Schaper, William A. The Place of the Public Library in the Administration of a City. *National Municipal Review*, October, 1914.

Tyler, Alice S. Public Libraries in Commission-Governed Cities. *National Municipal Review*, April, 1913.

Rae, W. S. C. Public Library Administration. New York, 1913.

(Municipal Efficiency)

Cerf, Myrtle. Bureaus of Public Efficiency: A Study of the Purpose and Methods of Organization. *National Municipal Review*, January, 1913.

Sait, Edward M. Research and Reference Bureaus. *National Municipal Review*, January, 1913.

Upson, L. D. The Dayton (Ohio) Bureau of Municipal Research. *National Municipal Review*, July, 1914.

Municipal Efficiency. Fifth Annual Conference of Mayors and Other City Officials, State of New York. Proceedings. 1914.

New York City. Municipal Reference Library. A list of references on the purchasing of municipal supplies and related topics. Bulletin No. 5, November 25, 1914, of the Municipal Reference Branch of the New York Public Library.

Cleveland, F. A. Chapters on Municipal Administration and Accounting. New York, 1909.

(Home Rule)

Goodnow, Frank J. *Municipal Home Rule*. Macmillan, New York. 1897.

Agar, John G. *Legislative Interference in New York*. *Municipal Affairs*, June, 1902.

Woodruff, Clinton Rogers. *The Pennsylvania Rippers*. *Municipal Affairs*, June, 1902.

Maltbie, Milo Roy. *Home Rule in Ohio*. *Municipal Affairs*, June, 1902.

Crafts, Clayton E. *Local Self-Government in Illinois*. *Municipal Affairs*, June, 1902.

Tanzer, Laurence Arnold. *Legislative Interference in Municipal Affairs and the Home Rule Program in New York*. *National Municipal Review*, October, 1913.

Smith, J. Allen. *Effect of State Regulation of Public Utilities upon Municipal Home Rule*. *The Annals*, May, 1914.

Merriam, Charles E. *The Case for Home Rule*. *The Annals*, January, 1915.

The Park Governments of Chicago: An Inquiry into their Organization and Methods of Administration. Report prepared by the Chicago Bureau of Public Efficiency. December, 1911.

The Nineteen Local Governments in Chicago: A Multiplicity of Overlapping Taxing Bodies with Many Elective Officials. Report prepared by the Chicago Bureau of Public Efficiency. 2d ed. March, 1915.

(State vs. Municipal Control of Public Utilities)

Wilcox, Delos Franklin. *Municipal Franchises*. 2 vols. *Engineering News*, New York. 1910-1911.

State Regulation of Public Utilities. *The Annals*, May, 1914. Twenty-eight articles by authorities, grouped under the following general heads: Legislation as to State Public Utility Commissions; State Regulation and Municipal Activities; Uniform Accounting and Franchises; Public Control over Securities; Valuation of Public Utilities; Electric and Water Rates; Standards for Service.

King, Clyde Lyndon, ed. *Municipal Ownership in California through Public Utility Districts*. *National Municipal Review*, January, 1914. Notes and Events.

Eshleman, John Morton. *State vs. Municipal Regulations of Public Utilities*. *National Municipal Review*, January, 1913.

Regulation of Public Utilities in Wisconsin: An Analysis of the System and the Results. Published by The Minnesota Home Rule League, Minneapolis. March, 1914.

Smith, J. Allen. *Municipal vs. State Control of Public Utilities*. *National Municipal Review*, January, 1914.

King, Clyde Lyndon. *Regulation of Municipal Utilities*. Appleton, New York. 1912.

Pond, Oscar L. *A Treatise on the Law of Public Utilities Operating in Cities and Towns*. Bobbs-Merrill, Indianapolis. 1913.

Mitchel, John Purroy. Local and State Regulation of Municipal Utilities. *The Annals*, January, 1915.

Erickson, Halford. The Advantages of State Regulation. *The Annals*, January, 1915.

Maltbie, Milo Roy. The Distribution of Functions between Local and State Regulation. *The Annals*, January, 1915.

Gray, J. H. Public Service Commissions. American Political Science Association. Proceedings. 1907.

INDEX

Abbey, E. A., mural decorations in Boston Public Library, 340.

Abbott, Edith, report to Merriam Crime Committee, Chicago, 159.

Aberdeen (Wash.), waste disposal, 81.

Abingdon (Va.), High School, 345.

Academy of Natural Sciences, Chicago, 250, 273.

Accidents, percentage of, 143; prevention, 143, 144.

Administration, improvement, 374; federal system, 376, 377; bicameral system, 377, 378; organic federal system, 378; business system, 379, 380; autocratic system, 381-383; council system, 383, 384; ultra commission, 384-386; organic council, 386-389; home rule, 389-391; Chicago, 392; metropolitan Boston, 393, 394; organic home rule, Los Angeles, 394. *See also* Government, Municipal Ownership, etc.

Advertising, libraries, 245; Newark municipality, 331; Baltimore, 331; billboards, 348-350.

Agassiz School, at Boston, 215.

Akron (O.), paving at, 58; university, 225; college, 227.

Alaska, political annexation, 16.

Albany (N. Y.), filtration, 93; death rate, 107.

Albion (Mich.), sewer commissioners, 300.

Alcohol, in cities, 4; regulation, 145-147; municipal dances, 312; and woman's suffrage, 388.

Alexandria (La.), city hall, 340.

Alhambra (Cal.), sewage farm, 102.

Alleghany (Pa.), typhoid death rate, 92.

Alleghany County Court House, Pittsburgh, 336.

Alleghany River, water from, 92, 108.

Altoona (Pa.), Vocational Night School, 219.

American Institute of Architects, 14.

American Library Association, founded, 228.

American Medical Association, 307.

American Museum of Natural History, 251.

Anacostia River, in city plan of Washington, 329.

Andover (Wis.), school campus, 11.

Ann Arbor (Mich.), concrete pavement, 59.

Apprentices, continuation schools, 223, 224.

Arbor Day, observed in Newark schools, 295.

Archery, in Washington Park, Chicago, 290.

Architecture, character, 14; post office, 15; public comfort stations, 103; Spanish, 276; landscape, 281; civic, 12, 337-339; library buildings, 340, 341; schoolhouses, 341-345; civic centers, 345-348. *See also* Art, Buildings, etc.

Arlington (Mass.), pageants, 324.

Arnold Arboretum, at Cambridge, 251.

Arnold, Bion J., Chicago city engineer, 41, 44.

Art, in schools, 11; galleries, 11, 246; civic, 65; art centers, 65, 262, 263; library collections, 237; Municipal Art Society, Baltimore, 284; William Morris on, 293; museum, Toledo, 338; Public School Art Society, Evanston, 345; New York Art Commission, 353; Chicago World's Fair, 353; municipal commissions, 354, 355. *See also* Architecture, Dancing, Museums, Music, Theater, etc.

Art Institute, Chicago, importance, 249, 255, 262.

Art instruction. *See* Education.

Astor Library, at New York, 236, 341.

Athletics. *See* Recreation.

Atlanta (Ga.), sewage disposal, 98; public organs, 314.

Atlantic City (N. J.), public comfort stations, 103; defective children, treatment, 191.

Auditoriums. *See* Halls.

Augusta (Ga.), municipal ownership of canals, 372.

Australia, riparian rights, 22.

Babies. *See* Infants.

Baker, Newton D., mayor of Cleveland, 125, 313, 322, 378.

Balboa, discoverer, 322.

Balot. *See* Franchise.

Baltimore (Md.), 140; poles, 10; Monument Square, 11; Washington Monument, 338; grade crossing accidents, 18; harbor improvements, 22; paving, 55, 56; buried wires, 64, 65; lighting, 65; waste disposal, 80; sewage disposal, 10, 80, 98, 100, 101; filtration, 92, 93; sanitation, 101; public laundries, 10, 105, 106, 308; public markets, 111, 112; campaign against mosquitoes, 128; high pressure fire system, 133; deficient children, treatment, 190; public library, 236; legislative reference department, 241; Mount Vernon Place, 276; parks, 283, 284; baths, 308; factory site commission, 331; height of buildings, 334; thoroughfares, 335; public decorations, 355; street railway receipts, 357.

Barrie, Sir James, mentioned, 319.

Bartelme, Mary M., judge in juvenile courts, 153, 154.

Baseball, in parks, 290. *See also* Recreation.

Bates Hall, Boston. *See* Libraries.

Baths, public, 104, 105; in New York, 267, 310, 311; in Boston, 297, 307-310.

Battery (N. Y.), emigrant station, 38.

Baxter, Sylvester, secretary of Boston Park Commission, 286.

Beethoven Musical Society, uses New York recreation centers, 268.

Belleville (Wis.), social centers, 258.

Ben Greet Company, dramatic group, 262.

Bennett, Arnold, cited, 138.

Bennett, E. H., city planning, 348, 352, 353.

Berkley (Cal.), medical records system, 118; education in, 211.

Berks County (Pa.), city in, 29.

Berlin (N. H.), education in, 213.

Beverly (Mass.), co-operative school system in, 220, 221; United Shoe Machinery Company, 221; bowling alley, 261.

Bigelow, Herbert, in Constitutional Convention, 259.

Biggs (Cal.), educational motion picture theater, 318.

Billboards. *See* Advertising.

Birmingham (Ala.), moral training in schools, 187; hygienic teaching, 189; school lunches, 193; parents' centers, 261; incinerators in parks, 291; trees, 293; city planning, 330.

Births, registration, 116.

Blackman, R. M., school principal and civic secretary, 266.

Blackwell's Island, description, 27.

Blankenburg, R., cited, 377.

Blind, libraries for, 233.

Bloomfield, Meyer, vocational bureau, 224.

Bloomington (Md.), city heating, 371.

Blue Earth (Minn.), fly extermination, 127.

Board of Education. *See* Government and Education.

Board of Health. *See* Health and Government.

Board of Trade. *See* Government.

Boise (Idaho), agricultural education, 198; education in, 213.

Bonniwell, Judge, Court of Domestic Relations, 155.

Bonstelle, Jessie, public recreation, 319, 320.

Boston (Mass.), swimming pools, 10; public libraries, 11, 228, 231, 232, 236, 237, 238, 239, 340, 341; park system, 12, 274, 282, 285-288; park commission, 286, 288; parks, rural, 288; parks, expenditure on, 288; Common, 12, 271, 275, 292; grade crossing accidents, 18; harbor improvements, 23; piers, 23; suburbs, 32, 34; subways, 10, 33-38, 44, 361; rapid transit, 32-35; municipal railway regulation, 33-36; street paving, 56-58, 61; conduits, 62, 63, 91; lighting system, 65; sprinkling cars, 74; waste collection, 78; snow disposal, 84; water front, 84; water conservation, 87; water supply, 91;

discharge of sludge, 97; sewage disposal, 99, 100; water ways, regulation, 100; public comfort stations, 103; death rate comparison, 107, 108; skyscrapers, 111; public markets, 111; public nurses, 116; school nurses, 118; medical inspection of school children, 116, 117; dental infirmary, 120; division of child hygiene, 120; tuberculosis, fight against, 123, 124; cars, standardization, fire department, 131; fire boat service, 132; high pressure fire service, 133; city police service, 136; traffic, police regulation, 142; safety devices, 144; juvenile probation, 151; municipal court, 158; municipal lodging house, 172; unemployed, how aided, 173, 175; kindergartens, 177; Montessori method in Andrews School, 178; drawing, required study, 181; art instruction, 182; school gardens, 196; Agassiz school, 215; trade school, 218; continuation schools, 223; vocational bureau, 224; museum, 251; children's museum, 251; Japanese collection, 249; social centers, 260; recreation, 260; citizenship centers, 265; boulevards, 278, 279; organized play, 296, 297; public baths, 309, 310; camping organizations, 311; municipal music, 315; ward halls, 316; Sunday observance, 320, 321; Christmas waits and carols, 322; city planning, 327, 328; buildings, height, 333, 334; thoroughfares, lack, 335; architecture, 338; aquaria, 339; monuments, 339; municipal art commissions, 354; land values, 358; printing department, 371, 372; finance commission, 380, 384, 394; home rule, 391; taxation, 393; metropolitan government, 393; gas company, 396.

Bostwick, Arthur, St. Louis Public Library, 240.

Boulder (Colo.), rural park, 290; city planning, 329.

Boy Scouts, interested in fire prevention, 135.

Bridgeport (Conn.), milk station, 115; dental clinic, 120; dental nurse, 120; school days, lengthening, 199; industrial school at, 217.

Bridges, in New York City, 26-29; utilization, 40; Brooklyn Bridge, 339; High Bridge, 339; Susquehanna Bridge, 339; Cabin John Bridge, 339.

Brighton (Mass.), public library, 240.

British Museum, a reference library, 230.

Bronx (N. Y.), 17, 27; transit to, 40; water supply, 90; motion picture theater, 264; streets used as playground, 301.

Bronx Park zoological garden, the largest in world, 292, 342.

Bronx River Parkway, 278.

Brookings (S. D.), city heating, 371; telephone system, 371.

Brookline (Mass.), water supply, 91; open air schoolrooms, 201; public library, 234; playground, 297; swimming pools, 308; natatorium on the Atlantic, 309; public buildings, 346.

Brooklyn (N. Y.), 17, 26; terminals, 37; subway, 38; tunnel systems, 37-39; rapid transit, 40; street tearing, 61; waste disposal, 82; water supply, 90; sewer trunks, 99; tenements, 110; high pressure fire system, 133; civics, teaching, 187; elementary schools, 208-210; children's library, 234, 238; library, 236; traveling library, 239; Institute of Arts and Sciences, 250; free lectures, 259; motion-picture theater, 264; driveways, 278; athletic field in Prospect Park, 290; out door eating, 291; streets, 335; *Society for Parks and Playgrounds*, 299; playgrounds, streets used as, 301; Erasmus School, 343; civic center, 347; buildings, 347; city plan, 352. *See also Bridges.*

Brownsville, in Brooklyn, children's branch library, 238.

Buchtel College, at Akron, Ohio, 227.

Buckley, M. T., civic secretary, 266.

Buffalo (N. Y.), grade crossing accidents, 18; paving, 56-58, 61; smoke abatement, 85; water, use, 87; tuberculosis hospital, 124; fire system, 133; court fines, 160, 161; hygienic teaching, 189; museum coöperation, 205, 338; public library, 235; library and school coöperation, 243; boulevards, 277; plantation of trees, 293; transportation, 347; civic center, 347; public baths, 310; planned by Joseph Ellcott, 327.

Buildings, municipal, increase, 11; city builds, 14; attraction of public, 8; Capitol, Washington, 15; codes for, 133, 134; skyscrapers, 332-334; New York Heights of Buildings Commission, 334; library, 340, 341; schoolhouses, 341-345. *See also Architecture.*

Burnham, D. H., architect, 14, 353; Burnham and Company, architects, 339, 348.

Business, High School of Commerce, Cleveland, 215; in towns, 331, 332; districts, 331, 332; and municipal ownership, 360-363; municipal trading, 369-371; private initiative and ownership, 372, 373; standards of, 399; in Omaha, 363, 364; Ypsilanti, 365, 366. *See also Industry.*

Butte (Mont.), paving, 58; ugliness, 331.

Calhoun, Patrick, railway grafter, 51, 361.

California, shore lines, 24; use of macadam, 60; of oil, 74; protection against rats, 129; products, 174; voluntary study in schools, 190; laws regulating colleges, 225; social centers, 258; tree planting by assessment, 293; definition of business areas, 332; public utilities, 367, 391; woman's suffrage and the liquor question, 388; home rule laws, 394.

Cambridge (Mass.), water supply, 87, 91; death rate, 108; schools, 179; vacation school, 190.

Camden (N. J.) tunnel, 45.

Camping, encouraged in rural parks, 292.

Canals through various cities, 336. *See also Transportation.*

Capitol, grounds, 277; at Washington, 284.

Carnegie, Andrew, municipal organs, Pittsburgh, 314; public libraries, 342. Carnegie Libraries. *See Libraries.*

Caruso, Enrico, deprived of freedom, 158.

Cascade Mountains, mentioned, 70.

Cedar Rapids (Ia.), civic center, 346.

Cedar River, water supply from, 70.

Cemeteries, as recreation grounds, 271.

Censorship, municipal dancing, 312.

Centennial Exposition, at Philadelphia, 20.

Central Park. *See New York.*

Chadwick, Cassie, mentioned, 361.

Chambers of Commerce and Municipal Finance, 368.

Charity, bestowal, 163-176; socialization, 163-165; Public Welfare Departments, 165-169; Widows' Pension Bureau, San Francisco, 169, 170; Municipal Lodging House, New York, 170-172; municipal employment bureaus, 172-176; no longer necessary, 306; of Andrew Carnegie, 342.

Charlesbank Gymnasiums, Boston, 297.

Charles River, signaling system, 144.

Charleston (S. C.), Battery, 277; municipal art commission, 354; municipal ownership of powder magazine, 372.

Charters, for harbors, 23; and Public Welfare Department, 164, 165; for cities, 378; St. Paul, 385, 386; Kansas City, 386; St. Louis, 386; Los Angeles, 386; Ypsilanti, 365. *See also Government.*

Chase, H. Lincoln, open air schoolrooms, 201.

Chattanooga (Tenn.), municipal administration, 385.

Chesbrough, E. S., organizes sewerage system, 95.

Chicago (Ill.), topography, 18; congestion, 3; telephones, 10; freight tunnels, 10, 42; drinking fountains, 10, 104; recreation, 10, 12, 207, 290, 291, 292, 297, 302-305, 311, 313, 314, 320, 323; *cows*, 11, 149-161; juvenile courts, 151-154, 157; Domestic Relations, 154, 155; felony cases, 159; court fines, 160, 161; Board of Public Welfare, 11; *education*, 11, 182-185, 190, 191, 192, 200, 202-204, 254; manual training, 214; continuation schools, 223; university, 225; schoolhouses, 265; *art*: galleries, 11; art and education, 182, 183; Art Institute, 249, 250; gathering of artists, 353; *parks*: park system, 272-275, 291; rural parks, 289; Grant Park, 12; Washington Park, 290; Lincoln Park, 339; *transportation*, 18-21, 32, 36, 40-44, 78, 143, 369; *accidents*, 18, 143; *municipal regulation*, 20, 40-44, 143, 369, 380; municipal ownership, 43, 63, 68, 69, 172, 241, 367, 369; franchises, 42-44; municipal conduit, 63; municipal electric plant, 68, 69; municipal lodging houses, 172; municipal reference

library, 241, 255; finance, 42-44; paving, 55, 56, 58; *streets and boulevards*, 56, 72, 277, 336, 355; electricity, 63, 67; gas, 66; public lighting, 69, 72; waste, 78; smoke, 84, 85, 86; water, 87, 93, 94, 96; drainage, 93; sewage, 94-96; filtration, 96; locks, 96; Sanitary District, 96; death rate, 94, 108, 109; medical inspection of public schools, 117; physical examinations, 118; school nurses, 118; dental clinic, 119, 120; tuberculosis sanatorium, 122; contagious diseases hospital, 124; fire, 133, 134, 135; police, 137, 140, 141, 145; Safety Commissions, 143, 144; moral commissions, 147, 148; Vice Commission, 147; employment bureaus, 173, 175; domestic science, 180, 181; civics, teaching of, 184, 185; hygienic teaching, 190; deficient pupils, treatment, 190, 191; home schools, 192; welfare work, 202; truancy schools, 203, 204; *museums*, 206, 250, 254; *public libraries*, 230, 232, 236, 239, 240, 242, 245, 248, 254, 341; social centers, 254; field houses, 270; Skokie Marshes, 289; skating, tennis, golf, 290, 291; refreshments, 291; Women's Clubs, 254, 302, 303; municipal dancing, 313, 314; city planning, 327; dock extensions, 332; skyscrapers, 333; field houses, 338; Lion House, Lincoln Park, 339; city hall, 339, 340; school architecture, 342-344; civic centers, 345; reconstruction, 348; politics, 348; billboards, 348-350; World's Columbian Exposition, 353; business men, 361; public utilities, 380; taxation, 385; mayoralty elections, 388, 389; debt limit, 392; Home Rule, 392.

Chicago Society of Artists, traveling collection, 262.

Children, schools, 6; nurseries, 106; death rate, 114, 115; welfare stations, 114, 115; hygiene, 115, 116; defective, 117; physical examinations, 118; clinics, 123; protection, 140; juvenile courts, 11, 150-154; defective children in court, 157; psychopathic institutes, 157, 158; vocational education, 214; libraries, 233. *See also Education.*

Children's Theater, New York, 262.

Christopher, Walter Scott, Department

of Child Study and Pedagogic Investigation, 190.

Chubb, Percival, social worker, 323.

Church, Alonzo, secretary of Boston Park Commission, 288.

Cincinnati (Ohio), hampered by franchise, 48; Rapid Transit Commission, 48; laws relating to street tearing, 62; waste collection, 76; filtration, 92; public laundries, 105; death rate, 108; dental clinics, 120; municipal hospital, 121; municipal tuberculosis sanatorium, 121; bad government, 121; Houses of Refuge for Boys and Girls, 162; Charities and Corrections, 164; school system, 180; school music, 183; defective children, 191; co-operative schools, 220; Woodward High School, 221; continuation schools, 222; university, 225, 226; children's clinic, 226; public library, 232; municipal reference library, 241; social centers, 259; Town Meeting Society, 260; outdoor eating in parks, 291; zoological gardens, 292; municipal dances, 312; biennial music festivals, 321; schoolhouses, 345; business and politics, 361.

Cities, conservation, 1-12; life, 2, 4; destructive agencies, 2; dynamics of, 1-3; immaturity, 3-6; congestion, 3; evils, 4; knowledge of, 6-8; cleanliness, 10-12; control, 18; suburbs, 32; waste disposal, 73-86; soot destruction, 84; types: seaport, 326-328; river, 328-329; hill, 329-330; prairie, 330-331; manager for, 386, 397. *See also the several cities.*

Citizenship centers. *See Social Centers.*

City Planning, examples, 9; Philadelphia planned by Penn, 275; seaports, 326-328; river cities, 328, 329; hill cities, 329, 330; prairie cities, 330, 331; business districts, 331, 332; height of buildings, 332-334; streets, 334-336; terminals, 336, 337; civic architecture, 337-339; city halls, 339, 340; library buildings, 340, 341; schoolhouses, 341-345; civic centers, 345-348; residential areas, 348; billboards, 348-350; recreation, 350; typical city plans, 350-354; municipal art commissions, 354, 355; city surveys, 355, 356; municipal plan commissions, 356, 357; city plans paying for themselves,

357, 358; suggestions for reform, 398.

Civic Centers, buildings, 345-348.

Civic Rooms, various cities, 232.

Civic Secretaries, duties, 266, 267.

Civics, teaching of. *See* Education.

Clapp, Henry M., school gardens, 196.

Class consciousness, effect of, 4; in relation to life, 6.

Cleaning. *See* Streets.

Cleveland (O.), three cent fare, street cars, 9, 32, 48, 49, 50, 51; municipal buildings, 11; accidents, 18; subway construction, 36; Tom Johnson, 46, 390; corporations, 48; schedule of fares, 50; transfers, 50; street paving, 56; brick paving, 58; arc lights, 66; electric plant, 69; electric street flusher, 74; street cleaning, 76; waste collection, 78; garbage, 79; smoke, 84; water, 87, 88; filtration, 92; public markets, 112; Little Mother Leagues, 115; anti-tuberculosis agitation, 122; campaign against flies, 125, 126; police, 139; conciliation court, 150; court fines, 161; correctional institution, Cooley Farm, 163; Public Welfare Department, 164, 165; Division of Health, 165; Lecture Bureau, 165; municipal employment bureau, 175, 176; hygiene, 189; deficient pupils, 190; school gardens, 196; Technical High School, 215; High School of Commerce, 215; Elementary Industrial School, 216; university, 227; public library, 230, 232, 236; children's library, 234; library training, 234; art museum, 250; public baths, 308; dance pavilions, 308; three cent dances, 309; municipal dances, 313; municipal music, 315; Community Christmas Tree, 322; city planning, 327; Union Station, 337; museum, 338; civic centers, 345; County Court House, 346; charter, 387; municipal art, 353; home rule, 391; business and politics, 361; municipalization of street railways, 361; preferential voting, 388.

Clinics, Children's, at Medical College, Cincinnati, 226; dental, 119, 120.

Coe, George A., music collection, 237.

Cold storage plant, use of, 112.

Colorado, juvenile courts, 151; anarchy in, 346; woman's suffrage, 388.

Colorado Springs (Colo.), drives, 12, 279; Sunday observance, 320; city planning, 329; library building, 341.

Columbia Valley, the, mentioned, 279.

Columbus (Ga.), industrial school in, 216.

Columbus (O.), street railway franchises, 48; pavements, 58; waste collection, 78.

Comfort stations. *See* Public comfort stations.

Commerce. *See* Business and Industry.

Commercial High School, at Brooklyn, 259.

Commissions, municipal, 356, 357, 394; art, 354, 355; city planning, 352; as form of government, 353, 383, 384, 387; salaries, 385.

Commons, The Boston. *See* Boston.

Communal wants, municipal ownership, 359, 360.

Communication, ease of, 9, 17, 334-339. *See also* Streets, Transportation, etc.

Competition, waste, 5; results, 30; Tom Johnson, 51.

Composite city, 8, 9.

Concerts. *See* Music.

Concordia (Kan.), municipal theater, 318.

Condon, Randall J., Home School, 193; cited, 214, 215.

Conduits. *See* Wires.

Coney Island, settling basin, 99; municipal bathhouse, 310, 311.

Congress. *See* Government.

Connecticut, industrial schools, in, 217; Sunday observance, 321; municipal land purchase, 358.

Constitution. *See* Government, Administration, etc.

Consumers, organized by the municipality, 359.

Cook County (Ill.), expenditure on forest reserves, 289.

Cooley, Harris R., cited, 163.

Coöperation, compulsory, 2; strength, 2; reward, 6; in schools, 213, 217, 220-222; municipal, in universities, 226; library and school, 242-245.

Corporations, business and politics, 361; freedom of, 368; municipal immorality, 374, 375; regulation, 391. *See also* Public Utilities, Business, etc.

Correctional Institutions. *See* Courts.

Council system. *See* Administration.

Courts, and three cent fare, 49; treated,

149-163; municipal, 149, 150, 168, 169; specialization, 149, 150; conciliation, 150; juvenile probation, 150, 151, 153, 156, 400; juvenile courts, 150-154; domestic relations, 154, 155; percentage of different cases, 155; night courts, 156, 157; women offenders, 156, 157; psychopathic institutes, 157, 158; Public Defender, 158-160; court fines, 160, 161; correctional institutions, 161-163; Board of Parole of New York, 162; Parole system, 168; reformatory, 162; New Hampton Farm Colony, 162; Cooley farms, 163; Ypsilanti, 366.

Crane and Lane Technical High Schools, at Chicago, 224.

Crichton, James E., organizes waste disposal, 81.

Crunden, F. M., librarian, 231.

Curtis, Cyrus H. K., gives organ to Portland, 314.

Dallas (Tex.), viaduct, 28; city nursery of trees, 293.

Dana, John C., librarian of Newark Library, 245.

Dancing, dance halls, supervision, 167, 168; at Evansville, 212; Chicago playgrounds, 304; Cleveland dance pavilions, 308; three cent dances, 309; municipal dancing, 311-314. *See also* Recreation.

Daughters of the American Revolution, mentioned, 270.

Davenport (Ia.), water fronts, 23; freight terminals, 23; river shipping, 23; museum co-operation, 205; natural history museum, 250.

Dawson, Jean, campaign against flies, 125.

Dayton (O.), public nurses, 116; Public Welfare Department, 165, 166; Health, Division of, 165; Corrections, Division of, 166; school gardens, 196; art museum, 250; city manager, 386.

Death rate, decrease in U. S., 107-110; infants, decrease in, 114, 115; children, decrease in, 114.

Debating, in Rochester social center, 257.

Deficient Children. *See* Education.

De Forest, Robert W., organization of Tenement House Department, 110.

De Groat, E. B., director of playgrounds, 303.

Delaware River, region near, 21.

Democracy, relation of city to, 1; abstract, 2; concrete, 2; of American municipal library, 340; the city the hope of, 359; popular rule and municipal administration, 387.

Dental clinics, 119, 120.

Denver (Colo.), situation, 9; cleanliness, 10; jitneys, 31; street lighting, 72; rubbish receptacles, 73, 74; smoke abatement, 85; milk transportation 113; juvenile courts, 151, 152; supplemented by parental court, 152; municipal lodging house, 172; school children, idea of advancement, 179; boulevards, 280; mountain drives, 289, 290; campers encouraged in the rural parks, 292; Rocky Mountain parks, 311; plantation of trees, 293; music in the Municipal Auditorium, 315, 317; civic centers, 346; public decorations, 355; street railway receipts, 357; business and politics, 361; municipal ownership of irrigation works, 372; woman's suffrage and Judge Lindsay, 388.

Des Moines (Ia.), civic center, 345; municipal buildings, 346; initiative, referendum and recall, 388.

Desplaines River, canal to, 96.

Detroit (Mich.), libraries, 11, 236; competition, result, 30; municipal railway regulation, 46, 47, 361; United Railway, mortgages, 47; paving, 55, 56, 58, 61; municipal conduit, building, 63; arc lights, 66; smoke abatement, 85; police station for women, 140; civic rooms, 232; motion pictures, 264; city planning, 348; constitution of Michigan, 365; municipal trading, 370, 371; public utilities, 391.

Diseases, tuberculosis, loss from, 108; tuberculosis hospitals, 121, 122-124; tuberculosis camping facilities, 311; typhoid, decrease in, 108, 109; typhoid, cause, 126; contagious, 117; children, defects of, 117, 120; infectious, hospitals for, 124, 125; malaria, decrease in, 128. *See also* Medical Inspection.

District of Columbia, grade crossings, 14; buildings, height of, 333; administration, 381.

Districts, types of, industrial, 331, 332; residential, 331, 332, 348; business, 331, 332.

Docks. *See* Harbors.

Domestic Science. *See* Education.

Drainage. *See* Water.

Drama. *See* Theater.

Drama League of Minneapolis, mentioned, 264.

Dressmaking. *See* Industry.

Drinking fountains. *See* Public Drinking Fountains.

Driveways. *See* Streets.

Dubuque (Ia.), slaughter houses, 113.

Duluth (Minn.), municipal lighting plants, 68; Correction Farm, 162; unemployed, aided, 173; Boulevard Drive, 277.

Earhart, Will, director of music, 184.

East Boston High School, mentioned, 260.

East River, 26; tunnels and tracts, 16, 90; bridges, 27; sewage, 98, 99.

East St. Louis (Ill.), architecture, 340.

East Side Forum, at New York, 269.

Economics, teaching of, 222, 257.

Education, public, 5; public school center of beauty, 11; reform, 8, 179; police and fire, 144, 145; improvement, 166; night schools for immigrants, 176; *indoor*, 177-194; kindergartens, 177, 178; elementary grades, 179; annual training, 179, 180, 212-214; domestic science, 180, 181; art instruction, 181-183; music, 183, 184; civics, 184-187; moral training, 187, 188; hygiene, 188-190; exceptional children, 190, 191; school lunches, 191-193; home school, 193, 194; *outdoor*, 195-210; nature study, 195, 196; gardens, 196, 197; agricultural, 197, 198; home work, 198, 199; vacation, 199, 200; open air, 200-202; welfare work, 202, 203; truancy, 203, 204; truant officer, 11; evening, 204; savings banks, 205; museum cooperation, 205, 206; all-year school, 206, 207, 252; elementary, 207-211; Junior High schools, 211, 212; grammar schools, 211; high schools, 211; industrial, 212, 216-219; foreign languages, 212; English, 212; high school fraternities, 213; vocational, 214, 215; prevocational, 215, 216; scholarships, 218; vocational high schools, 219, 220; schools of telegraphy, 220; marine high school, 220; continuation, 222-224; vocational guidance, 224-225; junior colleges, 225; English department, 225; university of Chicago, 225; municipal universities, 225-227; medical work of universities, 225-227; Training School for Children's Librarians, 234; University of Wisconsin, 253; school extension, 254; university extension, 254; Board of Education, 254; Chicago, 254; publicity, 255; Rochester, 256; use of school-houses, 256-259, 261, 265, 266, 269, 296; hygiene in, 343; free lectures, 259; High School of Commerce, New York, 267; New York playgrounds, 301; motion pictures, 318; Chattanooga commissioner of Health and Education, 385.

Efficiency, municipal, 397, 398; and the city's life, 401.

Electricity, street lighting, 10; steam, 17; use, 41; railways, 52; National Electric Light Assoc., 63; Consolidated Electric Subway Co., 63, 64; competition, 65-68; gas mantles, 65; arc lights, 66-69, 80; rates for private consumers, 68; municipal lighting plants, 65-72; commercial lighting plants, 68; rates, 71; electric cooking, 71; ornamental lighting, 71, 72; expenses, 72; electrification of railways, 86; Pasadena electric plant, 362; constitution of Michigan, 365; Lansing, 365; Ypsilanti, 366; franchises, 367.

Eliot, Charles, quoted, 285.

Eliot, Charles, Jr., Boston landscape architect, 286, 392.

Ellicott, Joseph, planned city of Buffalo, 327.

Elmira (N. Y.), medical inspection of schools, 116; dental clinics, 120; school savings banks, 205.

Emerson, R. W., cited, 376.

Employment bureaus, 256, 266, 267, 400. *See also* Charity.

Entomological Experiment Station, New York, 294.

Essex County (N. J.), mosquito campaign, 127; rural parks, 288.

Ettor, comrade of Giovannitti, 158.

Eugenics, teaching, 6. *See also* Health.

Evanston (Ill.), public library, 237; school houses, 344; Public School Art Society, 345.

Evansville (Ind.), education in, 212.
 Evening schools. *See* Education.
 Expositions, in libraries, 245; loan exhibits, Richmond, Ind., 262; Panama Pacific, 25, 59, 317; Chicago World's Fair, 353.
 Extension systems. *See* Education and Universities.

Fairmont Park. *See* Philadelphia and Parks.
 Fall River (Mass.), death rate, 107; saloon regulation, 146.
 Faneuil Hall, Boston, used as citizenship center, 265.
 Fares, three-cent line, 46, 50, 51; transfer, 50; schedule, 50; sliding scale, 51.
 Fargo (N. D.), social evil, regulated, 148.
 Farms for Delinquents. *See* Courts and the several cities.
 Farragut Memorial, at New York, 339.
 Federal Bureau of Labor, cited, 18.
 Ferries. *See* Transportation.
 Festivals, 321-324; New York citizenship festival, 265; social center pageant, 266; Arbor Day observed in Newark, 295; safe and sane Fourth of July, 321, 322; Community Christmas, 322; waits and carols, 322; democratic festivals needed, 400.
 Fetherston, John T., commissioner, street cleaning, 76; on snow disposal, 83.
 Field Columbian Museum, at Chicago, 251.
 Filtration of Water. *See* Water.
 Finance, municipal, 368, 372; financial statistics of cities, 370-372.
 Fire departments, 7, 130, 390; commissions, 332; protective systems, 10, 133, 134-136; expense of water, 87; escapes, 100, 111; apparatus, 130, 131; boats, use, 131; platoon system, 132, 133; losses from, 133, 134; schools, 144, 145; safe and sane Fourth of July, 321.
 Fisher, Irving, illness, statistics, 108.
 Fisher, Walter L., city counsel, Chicago, 44.
 Fitchburg (Mass.), Normal School at, 216; coöperative school system, 220, 221.
 Flagg, S. B., investigation, smoke abatement, 85.
 Flies, crusade against, 125-127.

Florida, navigation to, 95.
 Flushing (N. Y.), High School, architecture, 343.
 Ford, G. B., on city planning, 356.
 Forests, reservations, Boston, 286-288; expenditure of Chicago, 289; municipal forestry, 292-295; tree pests in New England, 294.
 Fort Wayne (Ind.), milk transportation, 113.
 Fort Worth (Tex.), jitneys, 31.
 Foster, J. Frank, superintendent of parks, 281; American playground movement, 303.
 Fountains, at Cincinnati, 339; of Lorado Taft, 339. *See also* Public Drinking Fountains.
 Fowle, William Bently, drawing in schools, 181.
 Framingham (Mass.), sewerage disposal, 97.
 Franchises, length, 7, 39, 42-44, 50, 51; for freight tunnels, 41, 42; settlement, 47-49; perpetual, 50; extension, 52-54; for buried wires, 63; sliding scale, 65; for sewage systems, 101; immigrant, 266; public utilities, 367, 368; municipal immorality, 375; taxation, 369; popular rule, 387-389; preferential voting, 388; woman's suffrage, 388; *Municipal Voters' League*, 389; Chicago, 392; suggestions for reform, 397-401.
 Franklin Park, in Boston, 251.
 Free speech, Rochester social center, 257; Chicago playgrounds, 304.
 Freight. *See* Railways.
 Fresno (Cal.), promotion in schools, 179; junior college at, 225.
Friends of American Art, mentioned, 249.
 Fullerton Hall, at Chicago, 249.
 Galveston (Tex.), viaduct, 13; dock companies, 22; concrete causeway, 28; Rosenberg library, 247; council form of government, 384, 385; contrasted with Los Angeles, 394.
 Gamblers, court fines, 161.
 Garbage, handling, 25, 77; systems of disposal, 78-80, 82, 83, 98. *See also* Waste.
 Gardens. *See* Education and Landscape Gardening.
 Gardner, G. A., philanthropist, 173.

Garfield Junior High School, Richmond, Ind., organization, 212; art exhibits, 263.

Gary (Ind.), civics, teaching of, 186; moral training in schools, 188; nature study, 196; all year school, 200; elementary schools, 207, 208; education, 211.

Gas, municipal plants, 65, 66, 72, 362-366; compared with private, 66-69.

Geier, Otto P., charity work of, 164.

Germans in Chicago, 273.

Germany, sewage systems, 98.

Gill, Wilson L., civics, teaching of, 187.

Giovannitti, deprived of freedom, 158.

Girard, Stephen, philanthropist, 342.

Glendale (O.), correctional farm, 162.

Gloucester (Mass.), lack of woods, 287.

Goethals, Col., superiority of military methods, 75.

Goler, George W., birth statistics, 115.

Golf, courses, 290; not a luxurious game, 291.

Goodrich, E. P., mentioned, 356.

Gorgas, Edmund Howard, campaign against mosquitoes, 128; methods, 386.

Government, municipal, 8; federal dependence of cities, 22; Philadelphia channel, 22; harbors, 23; levees, 25; corruption of cities, 43, 63; improvement, 52; Charter of Public Welfare Dept., 164, 165; self-government in schools, 212-214; Board of Education, 243, 254, 261, 267; city government, 254; self-government in recreation clubs, 267; Denver Chamber of Commerce, 280; lands sold to Denver, 289; tree planting in California, 293; small parks in New York City, 298; Brooklyn Society for Parks and Playgrounds, 299; Chicago parks, 302; public baths, 310; height of buildings, 333; Greater New York Charter, 352; laws regarding purchase of land, 358; best government governs least, 360; Panama, 368; District of Columbia, 381-383; executive and legislative, 385; municipal efficiency, 395-401; franchise, 397; public utilities, 398; city's life, 400. *See also* Administration, Commissions, Municipal ownership, etc.

Grade crossings. *See Railways.*

Grand Crossing (Ill.), public library, 240.

Grand Forks (N. D.), slaughter houses, 113, 372.

Grand Junction (Colo.), preferential voting, 388.

Grand Rapids (Mich.), clinic for infant feeding, 116; moral training in schools, 188; defective children, 191; vocational guidance, 224; public library, 236; library and school co-operation, 243; books on children, 246; social centers, 260.

Grand Trunk Pacific Railway, mentioned, 32.

Great Lakes, transportation on, 24.

Greenwich (Conn.), campaign against mosquitoes, 128; Village Association, 269.

Gregory, Ida L., juvenile court work, 152.

Griffin, Delia L., educator, 251.

Guérin, Jules, decorates Chicago municipal plan, 348.

Guthrie (Okla.), swimming pool, 309.

Gymnasiums. *See Recreation.*

Halbert, L. A., public welfare work, 166.

Halls, school auditorium, Evansville, 212; library auditoriums, 247; social center halls, 257; Cincinnati, 250; schoolhouses, used as, 261; Boulder's Rural Park, 290; Chicago playgrounds, 304; dance, as recruiting stations for vice, 312; civic auditorium, San Francisco, 314; municipal auditorium, Denver, 315; municipal auditoriums, 316, 317; New England town halls, 316; Boston ward halls, 316; city halls, 340; Washington Irving High School, 342; Ittner High Schools, 343.

Hamilton, Alexander, cited, 376, 381.

Hamilton (O.), municipal gas works, 361, 362.

Haney, James P., art education, supervision, 182.

Harbors, improvement, 22-26; water fronts, 22-26; piers, building, 22-25; docks, ownership, 22; docks, service, 24; recreation piers added to New York docks, 301; docks, Chicago, extension, 332; wharves, ownership, 22, 25; wharves, increase,

23; commissioners, 24; ports, 24; tide lands, 24.

Harlem (N. Y.), Wadleigh school buildings, 343.

Harlem River, 38; bridge, 26, 28; sewage emptied into, 98, 99; shore improvement, 277, 278.

Harris, N. W., endowment, 206.

Harrisburg (Pa.), concrete bridge, 29; city planning, 329.

Harrison, Bertram, manager of theater, 319.

Harrison, Carter H., Chicago mayor, 313.

Hartford (Conn.), exceptional children, clinics for, 190; capitol grounds, 277; value of streets, 294; city plan, 346; city center, 346; municipal plan commission, 350.

Hart's Island, Reformatory on, 162.

Haverhill (Mass.), water conservation, 87.

Health, public improvement, 8, 10, 119, 254; civic, 10; hindrance to, 98; public, reforms, 107-129; public organization, 130; division of health, 165; Rochester, 256; New York Board of Health, 301; communal wants, 360; Chattanooga Commissioner of Health, 385; The City's Life, 309. *See also* Diseases, Hospitals, Medical Inspection, Sanitation, and the several cities.

Healy, William, Juvenile Psychopathic Institute, 157, 158.

Heating, municipal, 371.

Heinroth, Charles, organist, 315.

Helena (Mont.), Home School, 193.

Hennessey (Okla.), municipal theater, 318.

Hewitt, Abram, mayor of New York, 298.

Hibbing (Minn.), High School, mural paintings, 344.

Hickson, William J., psychopathic institute, 158.

Hill, James B., cited, 32.

Hoboken (N. Y.), tunnels under, 16.

Holyoke (Mass.), municipal gas plants, 67, 68; electricity, cost, 68.

Hooker, George E., rapid transit, 41.

Hoquiam (Wash.), waste disposal, 81.

Hospitals, municipal, 120, 121; tuberculosis, 122-124; for infectious diseases, 124, 125.

Houghton (Mich.), civics, teaching, 186.

Housing, improvement, 109-111. *See also* Tenements.

Houston (Tex.), government control, 22; channels, 22; municipal docks, 22; traffic, police regulation, 143; auditorium, 317; constitutional home rule, 367.

Houston Municipal Band, at Denver, 315.

Howell, R. B., Omaha engineer, 363.

Hudson (N. Y.), water supply, 88.

Hudson River, 26, 277; tunnels under, 16, 90, 99; bridge across, 27; banks, 278; protection of channels, 332.

Hull House, playground movement in Chicago, 302.

Huntington, Collis P., cited, 32.

Hurd, Harvey B., cited, 151.

Hygiene. *See* Education and Health.

Illinois, smoke investigation, 85; juvenile courts, 151; employment bureaus, 174; education, 254; definition of business areas, 332.

Immigration, Americanization of immigrants, 254; social centers, 260; citizenship centers, 265; Social Center Pageant, 266.

Immorality, institutions of, 2, 312; in city, 4; investigation needed, 7.

Independence, in country, 1.

Independence (Kan.), unemployment, 173.

India, plague in, 109.

Indiana, pollution of lake water, 96; laws regulating continuation schools, 223; art expositions, 263.

Indianapolis (Ind.), pavements, 60; gas companies, 65, 66; public market, 112, 113; police system, 139; traffic regulation, 143; juvenile courts, 151; court fines, 161; Manual Training High School, 219; parks, 283; height of buildings, 334.

Industrial conditions, 107.

Industrial efficiency, increase of, 5.

Industrial revolution, relation of cities to, 1.

Industry, education for, 212, 215; dressmaking, 218, 222; millinery, 218, 222; traditions, 222; apprentices, 223, 224; industrial districts, 331. *See also* Business.

Infants, mortality, 114, 115; care, 114; welfare, 115, 116; nursery for tubercular, 122; books concerning, 246.

Initiative, Referendum and Recall, movement for, 384, 387, 388.

Insurance, necessity of heavy premiums, 134.

Intemperance. *See* Alcohol.

Interdependence, in cities, 1.

Iowa, subsoil favorable to concrete paving, 59; social evil, 148; public utilities in, 367; initiative, referendum and recall, 384.

Irish, in Boston, 393.

Irrigation works, municipal ownership of, 372.

Italians, in America, 257. *See also* Immigration.

Ithaca (N. Y.), municipal hospital, 120, 121.

Ittner, W. B., architect, 343, 344.

Jacksonville (Fla.), electricity, 69.

Jacobs, Mira Straus, music collection, 237.

Jamaica Plain (N. Y.), mentioned, 251.

Japanese tea garden, Golden Gate Park, San Francisco, 291.

Jefferson, Thomas, predecessor of city planners, 13, 351.

Jersey City (N. J.), paving, 57; death rate, 107; recreation in West Side Park, 290; city plan commission, 356, 357.

Jitneys. *See* Transportation.

Johns Hopkins University, at Baltimore, 241.

Johnson, Tom, Cleveland mayor cited, 46, 49, 163, 361, 378, 390; fares cheapened by, 50, 51; franchises, 51; competition, 51; memorial, 51.

Johnston, Mrs. Ella Bond, art exhibition, 262, 263.

Joliet (Ill.), tunnel, 95; aqueduct, 96.

Jones, Sam, cited, 46.

Jones, Mr. —, elimination of franchises, 48, 49; police system, 139.

Justice. *See* Courts.

Juvenile Courts. *See* Courts.

Kalamazoo (Mich.), kindergartens, 178.

Kansas, description, 1; viaduct, 29; fire prevention, 135; Public Welfare work, 166.

Kansas City (Kan.), electricity, cheapness of, 69.

Kansas City (Mo.), Board of Public Welfare, 11, 166-169, 261, 312; parks, 282; viaduct, 29; paving, 56, 61; streets, 56, 59, 354; "Little Mother leagues," 115; public nurses, 116; medical school inspection, 116; municipal hospital, 121; platoon system, fire department, 132; court fines, 161; prisoners, 161; parole system, 161; unemployed, 169; civics, teaching of, 186; library and school co-operation, 244; social centers, 260; Parent Teachers' Association, 261; Mothers' Congress, 261; university, 264; terminal, 337; city survey, 356; land values, 358; municipal trading, 371; "home rule" charter, 386; penalization of non-voter, 389.

Kaw River, viaduct, 29.

Kellogg, Kate S., civics, teaching of, 184, 185.

Kenilworth (Ill.), use of school buildings, 11; teaching of hygiene, 189; High School buildings, 344.

Kennedy, J. Wilmer, teaching of civics, 184.

Kent, William, cited, 302.

Key, Allen, cited, 151.

Kindergarten College, at Pittsburgh, 248.

Kindergartens. *See* Education.

Kingaley, Sherman C., cited, 114.

Knoxville (Tenn.), water supply, 88.

Koch, Caspar P., organist, 315.

Kohler, Chief, humanizing of police system, 139.

Kotschmar, Hermann, musician, 314.

Labor, employees, weakness, 3; employees, strike, 51; employees, wages, 88; motormen and conductors, earnings, 54; drivers for garbage collection, 82; surplus force of men for snow removal, 83, 84; employment, increase, 110; unemployment, cause, 110; police, division of work, 137, 138; police, hours, 142; employers improve workplaces, 168; alien labor, regulation, 174. *See also* Employment Bureaus.

La Crosse (Wis.), public drinking fountains, 104; municipal employment office, 175.

Lake Michigan, track elevation along shore, 18.

Lamb, Charles R., decorator, 341.

Lamb, F. S., decorator, 341.

Lamb, Mrs. F. S., decorator, 341.

Land values, in various cities, 358.

Landscape gardening, 281; at Rochester, 330.

Lansing (Mich.), drinking fountains, 10, 104; civic center, 345; capital of State, 365; electric lighting plant, 365.

Laundries. *See* Public Laundries.

Lawrence (Mass.), Massachusetts Experiment Stations, sewage disposal, 98; Giovannitti, arrest, 158, 159; city survey, Russell Sage Fund, 356.

League Island Park, Navy Yard on, 21.

League of Civic Clubs at Rochester, 256.

Leavenworth (Kan.), home work, credit for, 198.

Lectures, bureau of, 165; in libraries, 247; in art museums, 249; free, 252-254, 259; Chicago stereopticon, 304.

Lee, Joseph, father of the playground movement in Massachusetts, 306.

Legislative reference departments. *See* Libraries.

Legler, Henry E., Chicago librarian, 231.

Leipziger, Henry M., lecturer, 252.

L'Enfant, Pierre Charles, plan for capitol, 13, 329; plan for park, 14; predecessor of American city planners, 351.

Lenox (Mass.), library, 236.

Lenox Library, at New York, 236, 341.

Lewis, William D., cited, 213.

Lexington (Ky.), public kindergartens, 177, 178.

Libraries, 6; beauty, 11; need of reform, 8; public, 223-251; legislation for, 228; state aid, 228, 229; open shelf plan, 229-231; of Congress, 230; technology departments, 231; information given in Bates Hall, Boston, 231; for the blind, 233; periodicals, 233; children's rooms, 233-235; circulation, 235-238; Astor, Lenox and Tilden libraries, 236, 341; music collection, 236, 237; art collections, 237; branch libraries, 238; traveling libraries, 239; municipal reference libraries, 240-242; library and school co-operation, 242-245; Queensborough library, 246; publicity, 245-247; lantern slides, 246; a missionary enterprise, 246; librarians, 247, 248; splendid service of librarians, 374; organization, 247, 248; training schools, 248; in Rochester social center, 257; New York recreation centers, 267; used as social centers, 269; J. J. Hill reference library, St. Paul, 337; buildings, 340.

Lighting systems. *See* Electricity and Gas.

Lincoln, Abraham, picture of, 266; statues, 339.

Lindsey, Ben, judge of juvenile courts, 152, 388.

Little Rock (Ark.), school savings banks, 205; schoolhouses, 345.

Loans, Welfare Loan Agency, 168.

London (England), sludge disposal, 97.

Long Island City (N. Y.), tunnels under, 16; length, 16; Railway, 16, 27; protection by trunk sewers, 99; school savings banks, 205.

Los Angeles (Cal.), situation, 9; white ways, 10, 71, 72; water supply, 10, 88, 89; harbor improvements, 23; subway construction, 36; paving, 61; overhead wires, 62; arc lights, 70; slaughter houses, 113; public nurses, 116; policewomen, 140, 141; saloons, regulation, 146; Public Defender, 150, 158-160; Municipal Charities Commission, 164; employment bureau, free, 174; domestic science for elementary grades, 181; exceptional children, clinics for, 190; defective children, treatment, 191; school gardens, 196, 197; home gardens, 196, 197; education in, 213; marine high school at San Pedro, 220; schoolhouses used as polling places, 266; campers encouraged in the rural parks, 291; tree planting by assessment, 293; recreational centers, 305, 306; City Playground Association, 305; music, 306; camping, 311; city planning, 330; definition of business areas, 331; schoolhouses on the Mexico

patio plan, 345; residential areas, 348; street obstructions, 353; women members of municipal art commission, 355; waterworks, 363; municipal trading, 370; organic home rule, 394; contrasted with Galveston, 394.
 Los Angeles River, mentioned, 89.
 Louisiana, water fronts, 24; moral training in schools, 187.
 Louisiana Purchase Exposition at St. Louis, 324, 325.
 Louisville (Ky.), smoke abatement, 85; filtration of water, 92; municipal hospital, 121; civic rooms, 232; instructive motion pictures, 264; boulevards, 277; public supervision of trees, 293.
 Lowell (Mass.), death rate comparison, 107.
 Lyman, Edward H. R., endows theater at Northampton, Mass., 319.
 Lyman, Frank, mentioned, 319.
 Lynchburg (Va.), city planning, 330.
 Lynn (Mass.), laborers given work in forest, 173; magnificent woods, 287, 288; swimming, 309; business districts, 332; mud flats, 332.
 Macfarlane, Will C., organist, 314.
 Mackaye, Percy, playwright, 265, 325.
 McKim, monument of, 340.
 McKim, Mead and White, architects, 340.
 Macon (Ga.), schoolhouses, 342.
 Madison (Wis.), driveways, 12, 279; capitol grounds, 277; land values, 358.
 Maeterlinck, Maurice, poet, 319.
 Mall, The. *See* Washington.
 Manchester (N. H.), paving, 57.
 Manhattan (N. Y.), trolley wires, 9, 72; poles, 10; railway station, 15; tunnels, 16; approach, 26; bridge, 27, 36, 37; transportation, 37, 39; Manhattan Company, 39; tyranny of travel, 40; water supply, 90; sewage, 99; death rate, 107, 108; tenements, 110; civics, teaching of, 187; school lunches, 192; motion picture theater, 264; parks, 276; driveways, 278; schools and playgrounds, 299; Park Commission, 300; streets used as playgrounds, 301; municipal trading, 370. *See also* New York City.
 Manhattan Trade School, described, 217.
 Manual Training. *See* Education.
 Markets, municipal, 111-113.
 Marriage, eugenics, 6.
 Maryland, laws regulating land purchase, 358.
 Mason City (Ia.), paving, 59.
 Massachusetts, Rapid Transit Commission, 33; water, 87; skyscrapers, 111; tenements, 111; reporting of births, 116; medical inspection of schools, 117; tubercularis, 124; police women, 140; saloons, 146; juvenile probation, 151; court fines, 161; employment bureaus, 174; art instruction, 182; education, 216; trade schools, 218; laws regulating continuation schools, 223; public libraries, 228, 229, 236; reservations, 287; playground movement, 306, 307; municipal land purchase, 358; public utilities, 367; franchises, 367; finance commission, 384; interference of state in local affairs, 393.
 Mattapan, municipal hospital for consumptives, 123.
 Meadville (Pa.), water conservation, 87.
 Meder, Mrs. Leonora Z., Chicago Municipal Dance, 313.
 Medford (Mass.), taxation of billboards, 349.
 Medical inspection, school inspectors, 116; public schools, 116-118, 201; record systems, 118; school nurses, 118, 119; dental clinics, 119, 120. *See also* Diseases, Health, Sanitation, and the several cities.
 Memphis (Tenn.), water fronts, 23; school gardens, 197; libraries, used as social centers, 260; parks, 283.
 Menomonie (Wis.), swimming pool, 11; city agricultural school, 197; schoolhouses, 342.
Merchants and Manufacturers Association, at Baltimore, 241.
 Meriden (Conn.), town hall, 340.
 Metropolitan Museum, New York, 249.
 Mexicans, as laborers, 174.
 Michigan, work of Hazen Pingree, 47; civics, teaching of, 186; definition of business areas, 332; effete constitution, 365, 366.
 Milk, inspection, 113-115; milk stations, 113-116.
 Millinery. *See* Industry.

Milwaukee (Wis.), swimming pools, 10; viaducts, 29; municipal conduits, 63; waste collection, 77, 79; water, 87; "Little Mother Leagues," 115; saloon regulation, 146; employment, 174, 175; kindergartens, 178; public library, 231, 236; art museum, 250; free lectures, 253; social centers, 260; boulevards, 277; municipal dances, 312; municipal music, 315; public decorations, 355.

Ministers Association, at Rochester, 256.

Minneapolis (Minn.), water fronts, 23; paving, 60; waste disposal, 80; water consumption, 88; public comfort station, 103, 104; death rate, 107; medical inspection, 119; patrolmen, 136, 137; music in schools, 183, 184; boulevards, 278, 279; city planning, 329; industrial and residential districts, 331; municipal union station, 337; architecture, 338; street obstructions, 355.

Minnesota, industrial districts, 331; railway franchises, 367.

Minnetonka Lake, in Minnesota, 278.

Mint. *See* United States Mint.

Mississippi River, irrigation, 23; furnishes water supply, 104; parkways, 278; city planning, 329.

Missouri, viaduct, 29; public utilities, 367; franchises in, 367.

Missouri River, Omaha water supply, 364.

Mobile (Ala.), water fronts, 23; shell roads, 277.

Moline (Ia.), river shipping, 23.

Monopolies, regulation of, 390.

Monroe (Ia.), salt water swimming pools, 309; municipal railway, 371.

Montclair (N. J.), open air school, 201.

Montessori method, used in Lexington, Kentucky, 178.

Montgomery (Ala.), slaughter houses, 113.

Monuments, public, 104; Shaw Memorial, Boston, 339; Washington, 351. *See also* Architecture, Art, and Fountains.

Moore, Mrs. J. P., mentioned, 270.

Moral training. *See* Education.

Morality, in cities, 4; improvement of, 147, 148.

Morris, William, cited, 293.

Mosquitoes, campaign against, 127, 128.

Mothers Clubs. *See* Social Centers.

Mothers' Congress, at Kansas City, 261.

Moths, extermination of, 294.

Motion Pictures, treated, 263-265; investigation, 67; in hospitals, 123; educational, 135, 264, 318; controlled by Public Welfare Board, 167, 168; university of Wisconsin, 264, of Kansas, 264; Drama League of Minneapolis, 264; in playgrounds, 265; improvement of, 318; closed on Sunday, 321.

Motors, in parks, 30; omnibuses, 37; paving, 61; increased use, 73, 74, 130, 131; trucks, 78, 141; cycles, 141; percentage of accidents, 143; Speeders, municipal courts, 150. *See also* Transportation.

Mount Rainier, mentioned, 279.

Mount Rubidoux Pilgrimage, 323.

Mount Vernon (N. Y.), street obstructions, 355.

Mountain cities, 280.

Mountain drives. *See* Streets.

Moving Pictures. *See* Motion Pictures.

Muckrakers, in cities, 2.

Mulberry Bend Park, in New York City, 298, 299.

Municipal aid. *See* Municipal Ownership.

Municipal Courts. *See* Courts.

Municipal Lodging Houses. *See* Charity.

Municipal Ownership, of railway terminals, 18; effects of, 2, 20, 31, 34, 66, 67, 71; of railways, 30-54; lack of, 32; transportation, 36, 43; slums, 38; difficulties, 50, 53, 54; aid to parks, 286; libraries, 240-242; Denver land, 290; vandalism, 292; forestry, 292-295; Chicago playgrounds, 302; canals, 372; municipal music, 314-316; auditoriums, 316, 317; theaters, 318-320; municipalization of activities, 359-360; business, 360, 363; in Omaha, 363-365; Michigan, 365, 366; elasticity, 367, 368; finance, 368, 369; trading, 369-372; private initiative, 372, 373; unremunerative activities, 374; municipal immorality, 374, 375; suggestions for reform, 397-401.

Municipal program, suggestions, 397-401.

Municipal reference libraries. *See* Libraries.

Municipal Servants, labors of, 266, 267, 304.

Municipal Voters' League, mentioned, 389.

Murphysboro (Ill.), fire prevention, 135.

Museums, in cities, 6; coöperation, 205, 206; expositions, 246; treated, 249-251; scientific, 249; children's, 250, 251; appreciation of, 254; Toledo, St. Louis, Buffalo, 338; Washington Irving High School, N. Y., 342.

Music, and public libraries, 236; Rochester social center, 257, 259, 262; chamber concerts, Boston, 262; community chorus, 262; in New York recreation centers, 268; gramophone concerts, 269; Chicago playgrounds, 304; Los Angeles clubs, 305; municipal, 314-316; free Sunday concerts, 320; Cincinnati biennial festivals, 321. *See also* Education.

Muskegon (Mich.), dental clinics under Board of Education, 120.

Nantucket Island, Common, 287.

Nashua River, water supply, increase, 91.

Nashville (Tenn.), jitneys, 31; slaughter houses, 113; milk stations, 115; capitol grounds, 277; streets, 335.

Natural beauty, preservation, 285.

Natural History Museum, New York, 250.

Navigation, 95, 96; sewage interferes with, 98.

Neillsville (Wis.), civic secretaries, 266.

Nesbitt, Charles T., campaign against flies, 126.

New Bedford (Mass.), paving, 61; water conservation, 87.

New Britain (Conn.), industrial school at, 217.

New England, oil, use, 74; farms, 99; parks, 271; faithless to her heritage, 276; town halls, 316; library founders, 228.

New Hampshire, regulation of public libraries, 228, 229.

New Hampton Farms Colony, 162.

New Haven (Conn.), elms, 10; death rate comparison, 108; kindergartens, 178; The Green, 275; public decorations, 355.

New Jersey, tunnels, length, 16; mosquito campaign, 127; defective children, 191; forestry department, 293; taxation of billboards, 349.

New Orleans (La.), sewerage systems, 10, 100, 101; public markets, 10, 111, 113; water fronts, 22, 24-26; dock service, 24; ports, 24; belt railroad, 25; paved streets, 56; filtration of water, 92; rats, protection from, 129; police protection, cost, 136; railway tracks laid in boulevards, 279; Mardi Gras, 321; city planning, 328; municipal trading, 370; municipal ownership of sugar sheds, 372; belt railway, 372.

New York City (N. Y.), location, 9; density of population, 298; congestion of, 3, 37; transportation, 16, 26, 30-32, 36, 39, 40, 44, 52, 352; subways, 10, 36-38; bridges, 26-28, 39, 339; regulation of railways, 18, 36-40; franchises, 47, 50, 52, 369; grade crossing accidents, 18; terminals, 15-18, 32; streets, 17, 56, 334, 355; paving, 55-58, 60, 61; boroughs, 16, 392; water front, 22, 332, 353; conduits, 63, 64; lighting system, 65-67, 72; street cleaning, 74-76; waste disposal, 78, 81-84, 97; fire system, 10, 131-136, 144; water supply, 89-91, 369; sewage disposal, 97-99; sanitary area, 96; public comfort stations, 10, 103, 104; death rate, 107-109; housing, 10, 109, 110; tenement regulation, 109-111, 123; public markets, 111; milk stations, 116; "Little Mother Leagues," 115; medical school inspection, 117, 118; dental clinics, 120; tubercular increase, 123; police system, 136, 138, 142, 145; courts, 151, 152, 156, 157, 161; paroles, 162; widows' pensions, 169; municipal lodging houses, 170-172; unemployment problem, 173, 174; educational matters, 10, 181, 182, 187, 189, 191, 197, 199, 200, 202-204, 208-210, 217, 226, 267, 323; libraries, 233, 236, 239, 242, 246, 247; university, 225; vocational bureau, 224; museums, 206, 250; art institute, 249; free lectures, 252, 253, 258; recreation, 262, 264, 265,

267-269, 315, 323; an art center, 262, 354; a dramatic center, 319; parks, 265, 271, 274, 276, 289, 291, 292, 294, 298, 300; boulevards, 277, 278; playgrounds, 297-302; swimming beach, 309; public baths, 310, 311; Christmas in, 322; New Year's, 321; architecture, 334, 338-340, 343; city planning, 351, 352; billboards, 349; civic centers, 347; municipal investment, 370; debt limit, 300; trading enterprises, 372; administration, 379, 380; bureau of municipal research, 380.

New York State, public libraries, 228, 229; baths, 310; utilities, 367; franchises, 367; regulates height of buildings, 334; purchases municipal land, 358.

Newark (N. J.), waste collection, 76; death rate, decrease, 107; milk transportation, 113; contagious diseases, 117; mosquito campaign, 127; civics, teaching, 184; school days, lengthening, 199; vacation school, 199; school, all-year, 200, 206; public library, 231, 232, 237, 238, 245; meetings in public library, 247; museum, 250; library a social center, 260; public square, 288; forestry department, 293; Shade Tree Commission, 294, 295; municipal advertisement, 331; streets, 335; canals, 336.

Newark (O.), canals, 336.

Newarker, The, mentioned, 238.

Newbury, uses Newburyport library, 229.

Newburyport (Mass.), library, 229.

Newton (Mass.), vacation school, 199; city heating, 371.

Newton, Isaac, cited, 88.

North Dakota, moral training in schools, 188; Sunday observance, 320; public utilities, 367; franchises, 367.

North River, sewage emptied into, 98.

Northampton (Mass.), Players, 319; municipal theater, 319, 320; municipal ownership of theater, 372.

Norwich (Conn.), municipal lighting plant, 68.

Nurses, work in child welfare station, 11, 115; public increase, 115; benefit, 116; school, need for, 118, 119; dental clinics, assistance in, 120.

Oak Cliff, suburb of Dallas, 28.

Oakland (Cal.), docks, 22; belt railway, 22; jitneys, 31; health inspection, 118, 119; Public Safety Department, 140; employment, 174; business districts, 332.

Ogden (Cal.), jitneys, 31; social evil, 147.

Ohio, urban transportation, 48; laws, 51; paving, 59; gas, 66; municipal universities, 227; constitutional convention, 259; land purchase, 358; home rule law, 378.

Oil, necessary for pavements, 60, 61, 74.

Oklahoma, public defender, 159.

Oklahoma City (Okla.), street paving, 10; jitneys, 31; parks, 283.

Olmsted Brothers, architects, planned mountain roads, 280; Golden Gate Park, 281; Spokane parks, 282; Baltimore parks, 284.

Omaha (Neb.), fire department, platoon system, 132; high schools of commerce, 219; instructive motion pictures, 264; parks, 282; business and municipal ownership, 363-365.

Orange (N. J.), public squares, 288.

Orchestras. *See* Music.

Oregon, homework for schools, 198; woman's suffrage and the liquor question, 388.

Ornamental lighting. *See* Electricity and Gas.

Oshkosh (Wis.), municipal employment office, 175.

Osler, Dr. William, cited, 120.

Osseo (Wis.), civic secretaries, 266.

Outdoor Recreation League, New York, 300.

Owens River, mentioned, 89.

Pacific Coast, jitney originated, 31.

Pageants, 324-325; at Weymouth, Mass., 322; American Association, 324; at St. Louis, 324.

Panama, federal control, 18; gateway to, 25; governmental action in, 368.

Panama-Pacific Exposition, mentioned, 25, 54, 317.

Parent-Teachers' Association, at Kansas City, 261.

Paris (France), fortifications, 101.

Paris (Tex.), slaughter houses, 113.

Parker, George A., Superintendent of Hartford parks, 294.

Parkersburg (W. Va.), hygienic teaching, 189.

Parks, need of, 8; improvement, 12; shrubs and trees, 102; public comfort stations in, 103; Fairmount Park, 20, 21, 29; treated, 271-295; New England, 271; Chicago system, 272-275; 280; small parks and squares, 275, 277; parkways and boulevards, 277-279; outer parks, 280-281; park systems, 281-283; park commissions, 273, 274, 275, 282, 285, 302, 303, 304; Baltimore, 283, 284; Washington, 284, 285; Boston, 285-288; rural parks, 288, 290; recreation, 290-292; Newark, 294, 295; Municipal Art Society, 284; expenditure on parks, 288; athletic field in Prospect Park, Brooklyn, 290; Mulberry Bend Park, New York, 298, 299; recreation, 290-292. *See also* the several cities.

Parkways. *See* Streets.

Parsons, Frank, vocational education, 224.

Pasadena (Cal.), concrete bridges, 29; municipal electric plant, 69, 70, 362; arc lights, 70; sewage disposal, 97, 101, 102; medical statistics, 118; records, 118; kindergartens, 178; Rose Carnival, 321; city planning, 330; municipal trading, 370.

Passaic (N. J.), public library, 233; educational motion picture films, 318.

Patterson, John H., school gardens, 196.

Paving. *See* Streets.

Pawtucket (R. I.), oil used for streets, 74.

Peabody, Elizabeth, kindergarten work, 177.

Peale, Rembrandt, supervision of drawing, 181, 182.

Peck, Miss Medella L., municipal theater, 319.

Penn, William, cited, 21, 108; street system, 52; plan of Philadelphia, 275, 329, 330, 350.

Penn Yan (N. Y.), conduit building, 63.

Pennsylvania, concrete bridges, 29; Eastern Penitentiary, 43; court fines by installment, 161; moral training in schools, 188; museum coöperation, 205, 206; land values, 358; Supreme Court, 358; public utilities, 367; franchises, 367; "ripper" bills, 389; Railway terminal, 341.

Pensions, for policemen, 136; for mothers, 154; for widows, 164; Widows' Pension Bureau of San Francisco, 169, 170.

People's Forums, formation of, 254.

People's Institute, New York, mentioned, 268.

Perkins, D. H., school architect of Chicago, 344.

Perkins, Fellows, and Hamilton, architects, 339, 344.

Perry, Clarence Arthur, quoted, 258.

Philadelphia (Pa.), lighting system, 10, 65-67, 362, 363; grade-crossing accidents, 18; track elevation, 20, 21; subways, 21, 36; water front, 22; suburb, 45; transit companies, 32, 44-46; franchises, 44, 45, 50, 375; fares, 50; paving, 55-58; right of streets, 61; municipal conduits, 63; waste collection, 76, 77; smoke abatement, 85; water consumption, 87, 92; filtration, 93; public laundries, 105; death rate, 108; medical school inspection, 117; school nurses, 118; dental clinics, 120; campaign against pests, 128, 129; platoon police system, 138; police regulate traffic, 141, 142; police school, 145; fire department, 144; educational affairs, 177, 181, 182, 187, 192, 194, 195, 197, 202; libraries, 233, 236; museums, 205, 206, 249, 250; parks, 271, 280, 281, 292; festivals, 321; citizenship centers, 265; court of domestic relations, 155; unemployment problem, 173; city planning, 275, 329, 350, 351; streets and parkways, 21, 334, 335, 355; architecture, 338; philanthropy, 342; government, 377, 392; railway influence, 396.

Philanthropy. *See* Charity.

Philippines, political annexation, 16.

Phillips, J. H., moral training, 187.

Physical examination. *See* Children and Medical Inspection.

Picnics, in Chicago parks, 291.

Piers, New York recreation, 301, 302. *See also* Harbors.

Pinckney, Judge, juvenile courts, 152, 153.

Pinero, Arthur W., dramatist, 319.

Pingree, Hazen, cited, 46; three cent fare, 46; competition in urban transportation, 46; municipal ownership, 46, 47; governor, 47; franchises, 47.

Pittsburgh (Pa.), favorably located, 9; libraries, 11; children's libraries, 324; public library, 236; library publicity, 246, 247; Training School for Children's librarians, 248; municipal subway, 36; transportation problem, 52; street paving, 56-58; waste collection, 76, 78; smoke, 84; university smoke investigation, 85; water, 87; filtration, 92; source of water, 92; typhoid, 92, 108; death rate comparison, 107; kindergartens, 178; music in schools, 184; Kindergarten College, 248; schoolhouses used as polling places, 266; public organs, 314, 315; "blue Sunday," 320; the Hump, 335, 336; street obstructions, 355; municipal art commission, 355; city survey, Russell Sage Foundation, 356; municipal administration, 384.

Pittsfield (Mass.), civic theater, 318.

Platoon systems. *See* Fire and Police.

Playground and Recreation Association of America, cited, 306.

Playgrounds, maintenance, 165, 166; New York, 297-302; Chicago, 302-305; Los Angeles, 305, 306; Playground movement, 306, 307; training schools, 306. *See also* Recreation.

Plays. *See* Theater.

Pokomoke (Md.), extermination of flies, 127.

Police, need of reform, 7; efficiency, 130; service, 136, 137; platoon systems, 137, 138; humanization, 139; police women, 139-141, 399; duties, 141; traffic regulation, 141-143; schools, 144, 145.

Politics, Rochester social center, 257; Chicago, 348, 388, 389; business, 361; Philadelphia, 377, 378; legislative and executive antagonism, 378; politicians and the commission plan, 387. *See also* Administration, Government, etc.

Population, density of, in big cities, 298.

Portals, examples of city, 9, 13-29.

Portland (Me.), promenades, 277; public organs, 314.

Portland (Ore.), drives, 12; paving, 59, 61; death rate, 107; Public Safety Department, 140; Public Defender, 159; home work for schools, 198; library and school co-operation, 243; library auditoriums, 247; library periodicals, 248; motion pictures, 264; park system, 279; city planning, 329; Multnomah County Library, 341.

Porto Rico, political annexation, 16.

Ports. *See* Harbors.

Portsmouth (Va.), municipal ownership of ferries, 372.

Potomac River, canal, 13; parks near 14; mentioned, 329.

Poverty, in country, 3, 4.

Practical Arts School, Mass., 216.

Prague, Josefstadt, densest section in Europe, 298.

Private initiative, and public ownership, 372, 373.

Private ownership, examples, 26, 46; of forests, 293.

Prostitution. *See* Social evil.

Protection, walled city, 2; of cities, 130-148.

Providence (R. I.), transportation lines, 9; jitneys, 31; smoke, 85; death rate, 108; typhoid, 109; defective children, 190; Home School, 193; open air school, 200; free library, 246; terminal, 336.

Pryor, John H., sun cure for tuberculous children, 124.

Psychopathic institutes, the city's life, 400. *See also* Courts.

Public Baths. *See* Baths.

Public comfort stations, 10; demand for, 103, 104; cost of, 104.

Public Drinking Fountains, 10, 104.

Public Laundries, use of, 10; value, 104-106; at Baltimore, 308.

Public opinion, growth, 37, 147.

Public ownership, 26; and private initiative, 372, 373; municipal immorality, 375. *See also* Municipal Ownership.

Public utilities, franchises, 367; finance, 368; commissions to regulate, 390, 391; reform of govt. regulation, 398. *See also* Municipal Ownership, and the several utilities.

Public Welfare, Department of, Kansas City, 261.

Public Welfare Boards. *See* Charity.

Publicity, in libraries, 245-247; educational opportunities, 254.

Pueblo (Colo.), advancement of school children, 179.

Puget Sound, 11, 24, 343; canal under, 70.

Putnam, Herbert, quoted, 229, 247.

Puvis de Chavannes, decorations in Boston Public Library, 341.

Queensborough (N. Y.), water supply, 90; lantern slides in library, 246.

Quincy, Hon. Josiah, public libraries, 228.

Radcliffe College, 392.

Railways, stations, 7, 13-18, 52, 53; terminal facilities, 13, 15, 336, 337; grade crossings, 14, 15, 18, 19; subway systems, 10, 17, 20, 33-42, 64; rapid transit, 17, 36-40, 44-46, 54; tunnels, McAdoo New Jersey, 17; 20th Century, 18; building, 53, 54; permanent, 62; trackage, amount, 16; track elevation, 18-21; freight management, 25; street, passengers carried, 31; municipal regulation, 30-54; old elevated, utilization, 40; cable, 52; tracks laid in boulevards, 279; tracks, ugly, 281; Baltimore parks purchased by street, 284; transcontinental, 352; franchises, 367; Pennsylvania Station, 14, 16, 17, 19, 20, 341; Pennsylvania Avenue, description, 20, 21; Grand Central Station, 16, 17; New York Central, 17; New Haven, 17, 27, 31; Illinois Central, 18, 19; Lake Shore and Michigan Southern, track elevation, 19; Chicago, Rock Island and Pacific, track elevation, 19; Philadelphia and Reading, track elevation, 20; Baltimore and Ohio, tunneling, 20; Brooklyn Subway, 20; New Orleans Belt, 25; Long Island, 26, 27; Forest City Co., franchise, 51; United, 52-54; Consolidated Electrical and Subway Co., 63; Metropolitan Street Co., conduits, 64; Tubular Dispatch Co., mail, 64; Empire Subway Co., terminal system, 64; Chicago and Northwestern, 220; Baltimore and Denver Street, receipts, 357; Boston Elevated, 391. *See also* Transportation and the several cities.

Randall (N. Y.), city planning, 326.

Rapid Transit. *See* Railways, Transportation, and the several cities.

Rates. *See* Electricity.

Rats, campaign against, 129.

Reading (Pa.), concrete bridge, 29; water conservation, 87.

Real estate, speculation in, 110.

Recreation, 8; division, 165, 166; pier for, 171; Gary, Ind., 207; buildings for, Evansville, 212; dancing, 212; municipal dance halls, 241; social center dances, 244; Rochester, social center, 257; at social centers, 260, 261; *Parks and Playground Association*, New York, 265; New York recreation centers, 267-269, 297-302; lacking in Washington, 285; athletic field in Prospect Park, Brooklyn, 290; in the parks, 290-292; Chicago, 292, 302-305; public, 296-325; Boston, 296-297; Los Angeles, 305, 306; Playground Movement, 306, 307; free play in Massachusetts, 307; camping, 311; Boston Park and Recreation Department, 314; Sunday, 320; element in the city plan, 350; the city's life, 400. *See also* Parks and Social Centers.

Redlands (Cal.), official flycatcher, 127.

Red Wing (Minn.), endowed municipal theater, 318, 319; municipal ownership of theater, 372.

Reformatories. *See* Courts.

Reservations, forest, 286-288; public, 287.

Residential districts. *See* Districts.

Rex, Frederick, librarian, 241.

Rhode Island, transportation lines, 9; water conservation, 87; juvenile probation, 151.

Richardson, William Cummings, libraries designed by, 341.

Richland Center (Wis.), municipal theater, 318.

Richmond (Ind.), high school, 11, 212; art gallery, 11, 262, 263.

Richmond (N. Y.) water supply, 90; death rate, decrease, 108.

Richmond (Va.), capitol grounds, 11, 277; municipal gas plant, 66; kindergartens, 178; civic center, 345.

Riis, Jacob, 38, 298, 302; New York Community Christmas Tree, 322.

Rivers. *See* the several rivers.

Riverside (Cal.), Christmas tree, 322; Mount Rubidoux Pilgrimage, 323.

Roads. *See* Streets.

Rochester (Minn.), private surgery, 119.

Rochester (N. Y.), health department, 10, 256; smoke abatement, 85; public drinking fountains, 104; milk supply, inspection, 113-115; birth statistics, 115; medical inspection in public

schools, 117; dental clinic, 119, 120; Dental Association, 256; public health, progress, 119; hospital for infectious diseases, 124, 125; campaign against flies, 126; kindergartens, 178; shop school, described, 217; library with show windows, 246; social centers, 255-258; education, 256; *Ministers' Association*, 256; League of Civics Clubs, 256; Art Club, 256; music, 262; citizenship centers, 265; Fourth of July, 322; city planning, 330; the "Flower City," 330; one story schoolhouses, 344; business and politics, 361.
 Rock Island (Ia.), river shipping, 23.
 Rocky Mountains, Boulder's rural park, 290; camping facilities, 311.
 Rohe, Mayor, of Baltimore, cited, 307.
 Roosevelt, Theodore, mentioned, 386.
 Rosenberg Library, Galveston (Tex.), lectures at, 247.
 Rowan County, social centers, 270.
 Roxbury (Mass.), George Putnam School, 196.
 Rumbold, Charlotte, St. Louis Recreation Commission, member, 324.
 Russell Sage Foundation, children, defective teeth, 117.
 Russell Sage Fund, city surveys, 356.
 Ryerson, Art Library, Chicago, 249.
 Sabetha (Va.), city heating, 371.
 Sacramento (Cal.), uses macadam, 60; saloon compensation ordinance, 146; capitol grounds, 277; city planning, 330.
 Safety, 19; safety commission, 143, 144.
 St. Andrews, golf, 291.
 Saint Cloud (Minn.), home work, credit for, 108.
 St. Gaudens, Augustus, on city planning, 353.
 St. Johnsbury (Vt.), museum at, 251.
 St. Louis (Mo.), street flushing, 10, 74; schoolhouses, beauty, 11; schoolhouses, use, 261; school architecture, 343; libraries, public, 11, 231-233, 236, 239, 240, 248, 341; grade crossing accidents, 18; water fronts, 23; private terminal, 26; viaducts, 29; municipal lines, competition, 30; subway construction, 36; traction indebtedness, 44; street paving, 56, 58, 59; conduits, 62; arc lights, 66; waste collection, 76; smoke abatement, 85; filtration, 92; municipal lodging houses, 172; museum cooperation, 206; Museum in Forest Park, 338; manual training, 214; motion pictures, 265; portable exhibition booth, 318; pageant, 324, 325; city hall, 340; Central Parkway, 340; billboards, 349; public decorations, 355; commission government, 385; "home rule" charter, 386.
 St. Paul (Minn.), water fronts, 23; death rate, decrease, 107; library and school co-operation, 244; boulevards, 278; city planning, 329; civic architecture, 337; library building, 341; municipal administration, 385; charter, 385, 386.
 Salisbury (N. C.), community building, 270.
 Salt Lake City (Utah), gutters, 10; water, extravagant use, 87; exceptional children, clinics for, 190; schoolhouses used as polling places, 266.
 San Antonio (Tex.), mosquitoes, extermination, 128; policewomen, 140; school gardens, 196; city planning, 330; streets, 335.
 San Bernardino Mountains, camping facilities, 311.
 San Diego (Cal.), farm for delinquents, 162; city planning, 327.
 San Francisco (Cal.), municipal ownership, 9, 52, 371, 372; natural beauty, 9; water fronts, 13, 22, 24-26; ferry system, 16; Union Ferry Station, 9, 32; grade crossing accidents, 18; docks, 22, 24; belt railroad, 22, 25; ports, 24; bubonic plague, 25; municipal lines, competition, 30; suburbs, 32, 34; subway construction, 36; omnibus line, 52; municipal railway, 52-54; franchises, extension, 52-54; street paving, 56-58; rats, protection against, 129; high pressure fire system, 133; police protection, 136; saloons, regulation, 146; Widows' Pension Bureau, 169, 170; family, unit for living wage, 169; art instruction, 183; Japanese Tea Garden in Golden Gate Park, 291; zoological gardens, 292; public library, 237; Golden Gate Park, 281; Civic Auditorium for dances, 314; music stand in Golden Gate Park, 315; Spreckels

Band Stand, 338; auditorium, 317; Panama-Pacific Exposition, 317; Sunday recreation, 320; city planning, 327; harbor, 336; city hall, 340; civic center, 347; business and politics, 361; city and county government merged, 392.
 San José (Cal.), rural park, 290; park benches, 292.
 San Pedro (Cal.), Marine High School, 220.
 Sanitation, results, 101, 104, 106, 107, 113, 254; control, 107; milk inspectors, 113, 114; crusade against flies, 126; New York tenements, 298. *See* Health and Medical Inspection.
 Sargent, John, mural decorations in Boston Public Library, 341.
 Sauk City (Wis.), social center pageant, 266; civic secretary, 266.
 Savannah (Ga.), water fronts, 23; squares, 276; boulevards, 277.
 Schenck, August, address on deficient children, 190.
 Schneider, Herman, Municipal University of Cincinnati, 220.
 School Gardens. *See* Education.
 School Improvement Association, Birmingham, Ala., 261.
 School Lunches. *See* Education.
 Schoolhouses, buildings, 341-345. *See also* Education.
 Schreiber, Cornell, fares, equitable rate, 49.
 Schuylkill River, region near, 21.
 Scott Manual Training School, Toledo, opening, 214.
 Seaports, 326-328.
 Seattle (Wash.), description, 9; harbor improvements, 23; municipal lines, competition, 30; municipal conduits, building, 63; municipal lighting plant, 70, 71; lighting, expense, 72; street illumination, 70, 71; municipal ownership, 71, 371; waste disposal, 81; death rate, decrease, 107, 108; fire department, platoon system, 132; park system, 279, 283; swimming beach, 309; city planning, 329, 330; leveling of hills, 335; woman's suffrage, 388.
 Seidel, Emil, municipal dances under, 312.
 Self-government. *See* Government.
 Selma (Ala.), employment bureaus, 267.
 Settlements, Chicago, 302; public settlement, Los Angeles, 306.
 Sewage, systems, 2, 10, 26, 94, 102, 303; disposal, 93, 96-98; sewer farm, 102, 102.
 Shank, S. H., public market, 212, 213.
 Shaw, G. Bernard, playwright, 319.
 Shaw, Mrs. Quincy Adams, vocational bureaus, 224.
 Shaw Memorial, at Boston, 339.
 Sheldon, Theodore B., endowed municipal theater at Red Wing (Minn.), 318.
 Sioux City (Ia.), concrete pavement, 59.
 Skating, in Chicago, 290, 302; flooding of vacant lots in Chicago, 305.
 Skokie Marathons, to belong to Chicago, 289.
 Skyscrapers, 111, 133. *See also* Buildings.
 Slums. *See* Tenements.
 Smith College, relation to theater in Northampton, 318.
 Smithsonian Institute, at Washington, 251.
 Smoke abatement, 84-86; inspectors, 360. *See also* the several cities.
 Snow disposal, 83-84.
 Snyder, C. B. J., school architect of New York, 343.
 Social centers, recreation, 6; development, 167, 168; Mothers' Clubs, 222, 261; dances, 244; organization, 252; free lectures, 252-254; Chicago school extension, 254, 255; Rochester, 255-258; recreation centers, 259-261; New York recreation centers, 267-269; functions, 259; Cincinnati, 259; Boston, 260; Rochester, 260; Parents' centers, 261; art centers, 262, 263; citizenship centers, 265, 266; civic secretaries, 266, 267; various, 269, 270; pageant, 266.
 Social evil, in city, 4; vice commission, policewomen aid to, 141; vice commissions, 147, 148, 190; morals commission, 147, 148; red light injunction statutes, 148; dance halls, recruiting stations for vice, 312; community uses of leisure, 400. *See also* Dancing.
 South America, steam railways, 32.
 South Hadley (Mass.), electricity, cost, 68.
 South Haven (Mich.), municipal trading, 365.

- South Norwalk (Conn.), electric plant, 69.
- Spokane (Wash.), arc lights, 66; school gardens, 197; park commission, 282; parks, 283.
- Spreckels Band Stand, San Francisco, 338.
- Springfield (Ill.), city survey, Russell Sage Fund, 356.
- Springfield (Mass.), municipal buildings, increase, 11; waste collection, 77; motor equipment, increase in, 130, 131; exceptional children, clinics for, 190; trade school, 218; public library, 236; trees, 294; safe and sane Fourth of July, 321; municipal architecture, 340.
- Sprinklers, automatic, 131, 135, 136.
- State, The. *See* Government.
- State aid, to libraries, 228; Boston parks, 286. *See also* Government.
- Staten Island, 90, 108; hospital on, 123; parks, 289.
- Stations. *See* Railways.
- Statistics, library, 244; density of population, 298; public baths, 307; the city's life, 309.
- Stevens, Thomas Wood, pageant written by, 325.
- Stockbridge, Frank Parker, social center work, 260.
- Stout, J. H., city agricultural school, 197.
- Stover, Charles B., interest in public recreation, 300, 303.
- Street Railways. *See* Railways.
- Streets, cleanliness, 10, 11; cleaning, 7; improvement in cleaning, 73-76, 82; flushing appliances, 72, 73, 82; rubbish receptacles, 73, 74; sweeping, 78; paving, 7, 10, 55-61, 100; subways, 34, 35; cars speed, 34; congestion, Washington, 35; Washington tunnel, 35; street tearing, right, 61, 62; rights in, 49; improvements, 54-72, 272; lighting, 65-71; parkings, 102; parkways and boulevards, 21, 275, 277-279; driveways, 279, 280; park roads, 281; mountain roads, Denver, 280, 289; mountain roads, Kansas City, 282; department of, Birmingham (Ala.), 293; value of, in Hartford, 294; children's play in, 296, 297, 301; multiplication of, in Philadelphia, 334; communication, 334-336; New York City, 334; Central Parkway, St. Louis, 340; Washington, 351; city plans, 351; communal wants, 359.
- Strong, C. H., cited, 75.
- Suburbs. *See* Cities and the several cities.
- Subways. *See* Railways and the several cities.
- Sudbury River, conduit to, 91.
- Summit (N. J.), medical cases reported, 118.
- Sumter (S. C.), municipal administration, 386.
- Sunday, recreation, 320; observance, 320, 321; concerts, 321.
- Sunday, Billy, revivalist, 311; at Philadelphia, 377.
- Superior (Wis.), paving, 55, 56; municipal employment office, 175.
- Supreme Court. *See* Courts.
- Surveys, schools, 244; cities, 355-357.
- Susquehanna River, thoroughfare along, 329.
- Swann, Thomas, mayor of Baltimore, 284.
- Swimming pools, increase, 10; in schools, 11; Evansville, 212; Boston, 297; Chicago, 302, 303; West Side Natatorium, Milwaukee, 308; Brookline, 308, 309; salt water, Guthrie, 309; Boston, 309; Seattle, 309; New York, 309. *See also* Recreation.
- Syracuse (N. Y.), waste collection, 77; children, nervous and anæmic, 200; plantation of trees, 293; residential districts, 334.
- Tacoma (Wash.), high school, 11, 342; schoolhouse building, 343; municipal lines, competition, 30; Public Safety Department for Women and Children, 140; business districts, 332.
- Tammany, mismanagement, 37; New York ruled by, 38; defeat, 74-76.
- Taxation, expense of Chicago playgrounds, 303; Sunday tax, 320; franchises, 366; District of Columbia, 382.
- Taylor, Judge, rapid transit system, 45; schedule of fares, 50.
- Technical High School, Cleveland, established, 215.
- Telegraphy, Western Union Telegraph Company, 63; school of telegraphy, 220.
- Telephones, systems, 41; public, 103; Brookings (S. D.), 371.

Tenements, Tenement House Commission, 10, 297, 298; regulation, 109-111; model, 298; slums, 298; Seward Park, 299. *See also* Housing and the several cities.

Tennis, in Chicago parks, 290.

Terminals. *See* Railways.

Texas, viaduct, 28; experiments in municipal administration, 384.

Theater, 6; investigated by Public Safety Department, 67; dramatic clubs, 268, 269; Chicago playgrounds, 304; Los Angeles dramatic clubs, 305; municipal, 318-320; municipal ownership, 372.

Thiry, J. H., school savings banks, 205.

Thompson, Reginald H., city engineer, 330.

Tilden library, mentioned, 236, 341.

Toledo (O.), art galleries, 11; art museum, 250; municipal railway regulation, 46, 47; free fares, 48; merger corporation, 49; lack of home rule, 49; paving, 58; arc lights, 66; police system, humanizing, 139; University, 227.

Topeka (Kan.), arc lights, 66; Improvement Survey, 161; city survey, 355.

Track Elevation. *See* Railways.

Trade. *See* Business and Industry.

Traffic, police regulation, 141-143; treated, 334-336.

Transfers. *See* Fares.

Transportation, model, 9; local, 9; interurban, 13; rapid transit, 13, 16, 17; improvement, 16-18; ferries, systems, 13, 15-17, 22-25; municipal ownership, 372; jitneys, 30, 31; urban, 31-33; unification, 43, 44; horse cars, 52; delivery of library books, 240; public motor rates, 241; park transportation, 280, 281; communal wants, 359. *See also* Harbors, Railways, and Streets.

Trask, Mrs. Katrina, plays by, 319.

Trees, beauty, 10; in small cities, 292, 293; in large cities, 293-295; city nursery in Dallas, 293.

Trinity River, viaduct over, 28.

Trout, Philip, public recreation, 313.

Truancy. *See* Education.

Tuberculosis. *See* Diseases.

Tunnels. *See* Railways and the several cities.

Tweed, William, municipal ownership of subway, 37.

Twin Harbors (Mich.), municipal trading, 371.

Tyler, Anna C., public librarian, 234.

Typhoid. *See* Diseases.

Unemployed, how aided, 172-176.

United Shoe Machinery Company, Beverly, organization, 221.

United States Mint, New Orleans, mentioned, 328.

Universities, municipal, 225-227. *See also* Education.

Utica (N. Y.), system of ducts, 63; residential districts, 334.

Vacation schools. *See* Education.

Vallejo (Cal.), saloons, reduction, 146.

Veiller, Lawrence, organization of Tenement House Department, 110.

Viaducts. *See* Bridges.

Vice. *See* Alcohol and Social evil.

Virginia, laws regarding purchase of land, 358.

Virginia (Minn.), libraries used as social centers, 269.

Wage-earner's Theater League, New York, mentioned, 262.

Wald, Lilian D., school nurses, 118.

Walker, John Brisben, mountain roads, 280.

Waltham (Mass.), school gardens, 197.

Ward, Edward J., social center work, 252, 258; sent to Wisconsin, 260; cited, 270.

Ward's Island, settling basin at, 99.

Wardrooms, in New England, 265.

Waring, 252; street cleaning, 75, 76; incinerator, 82.

Warren (Pa.), schoolhouses, 342.

Warrensville (O.), hospital service, 122.

Washington, George, plan for capitol, 13; portrait, 266; predecessor of city planners, 350, 351.

Washington (D. C.), city planning, 9, 329, 351; monuments, 11, 21, 351; Mall, 12, 14; railway stations, 13-15, 336, 337; grade crossings, 14; capitol, description, 14, 15, 284; property values, increase, 15; paving, 58; overhead wires, 9, 65, 72; waste collection, 78; filtration, 93; public comfort stations, 103; housing, im-

provement, 110, 111; pensions of policemen, 136; patrolmen, number, 136, 137; Smithsonian Institute, 251; loan exhibits, 262; parks, 276, 284, 285; zoölogical gardens, 292; public supervision of trees, 293; plantation of trees, 293; government buildings, 345; streets, 351; Federal Art Commission, 354, 355; municipal administration, 381-383; commissions, 391.

Washington Irving High School, New York, 342.

Wastes. *See* Cities, and the several cities.

Water supply, 2, 7, 10, 87-94, 108, 131, 132, 134; meters, lack, 86; conservation, 87, 88; filtration, 91-93; drainage system, 93-96, 101; waterways, regulation, 100; Los Angeles, 363, 370; Ypsilanti, 365, 366; Water Department, Boston, 393; the city's life, 399.

Water fronts. *See* Harbors.

Weatherford (Okla.), municipal trading, 371.

Wellesley (Mass.), water conservation, 87.

Wells, Mrs. Alice Stebbins, first police-woman in Los Angeles, 140.

Weymouth (Mass.), pageant, 322.

Wharves. *See* Harbors.

Wheeling (W. Va.), municipal gas plants, 66.

White, William Allen, cited, 1.

Whitlock, Brand, three-cent fare, 49; police system, humanizing, 130.

Wichita (Kan.), viaduct, 29; auditorium, 317.

Wilde, Oscar, mentioned, 319.

Willamette (Ore.), mentioned, 279.

William Penn High School, Philadelphia, organization of, 213.

Williams, Roger, cited, 108.

Wilmington (Del.), campaign against flies, 126.

Winchester (Mass.), June Breakfast in Town Hall, 316; civic center, 346; description, 347.

Windsor, England, Long Walk, 14.

Winona (Minn.), library building, 341.

Winston-Salem (N. C.), civics, teaching of, 186; city planning, 330.

Wires, telephone conduits, 10, 41; electric conduit system, 53; permanent conduits, 62; overhead conduits, 62-65; economy, 63; private conduits, 63; buried, 63-65; control of, 64; private trolley system, 64; increase of, 64, 65; value, 71; used for drainage, 101.

Wirt, William A., elementary education improvement, 207-209; mentioned, 252.

Wisconsin, county agricultural schools, 198; continuation schools in, 22, 223; University Extension Department, 253; social centers, 258; motion pictures, 264; industrial districts, 331; municipal land purchase, 358; state commission, 391.

Wissahickon Creek, mentioned, 29.

Woburn (Mass.), art museum, 250, 341.

Women, in industry, 3; domestic, 4; policewomen, 139-141; Safety Commission, 144; proportion of sexes at University of Cincinnati, 227; Rochester social centers, 256; woman's suffrage, 265; and the liquor question, 388.

Women's Clubs, mentioned, 232; Chicago, 254; Salisbury, N. C., 270; playground committee of Chicago, 302, 303.

Women's Municipal League, at Boston, 260.

Wood, Walter J., cited, 159.

Woodbury, Commissioner, incinerator, built by, 82, 83.

Woods, Arthur, Police Commissioner, 301.

Woodward, Judge Augustus B., planned rebuilding of Detroit, 328.

Woodward High School, Cincinnati, described, 221.

Worcester (Mass.), sewage disposal, 97, 98; saloons, regulation of, 146; library and school coöperation, 242; art museum, 250; wardrooms, 265.

Workman, D. T., artist, 344.

World's Fair, at Chicago, 18, 19, 274, 353; museum coöperation, 206.

Wyoming (O.), correctional institute, 162.

Yerkes, C. T., mentioned, 361.

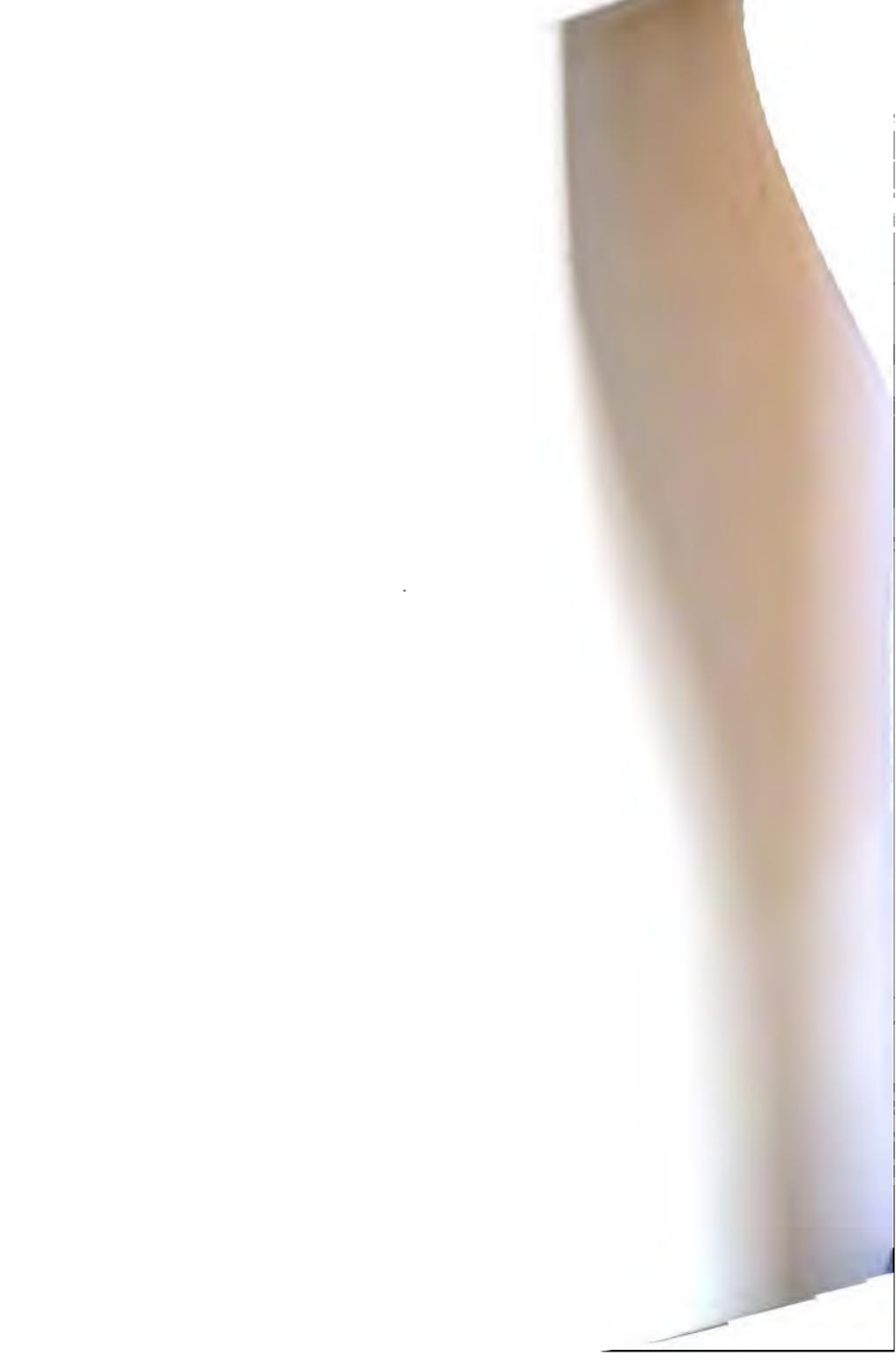
Yonkers (N. Y.), municipal hospital, 120, 121; public baths, 310; women members of municipal art commission, 355.

York (Pa.), cooperative school system, 221.	Ypsilanti (Mich.), municipal ownership, 365, 366; gas and water works, 365, 366.
<i>Young Men's Christian Association, Meriden, Conn.</i> , 340.	Zangwill, Israel, mentioned, 319.
Youngstown (O.), ugliness of, 331; public comfort station, 103; social evil, 147.	Zoological gardens, in several cities, 292.





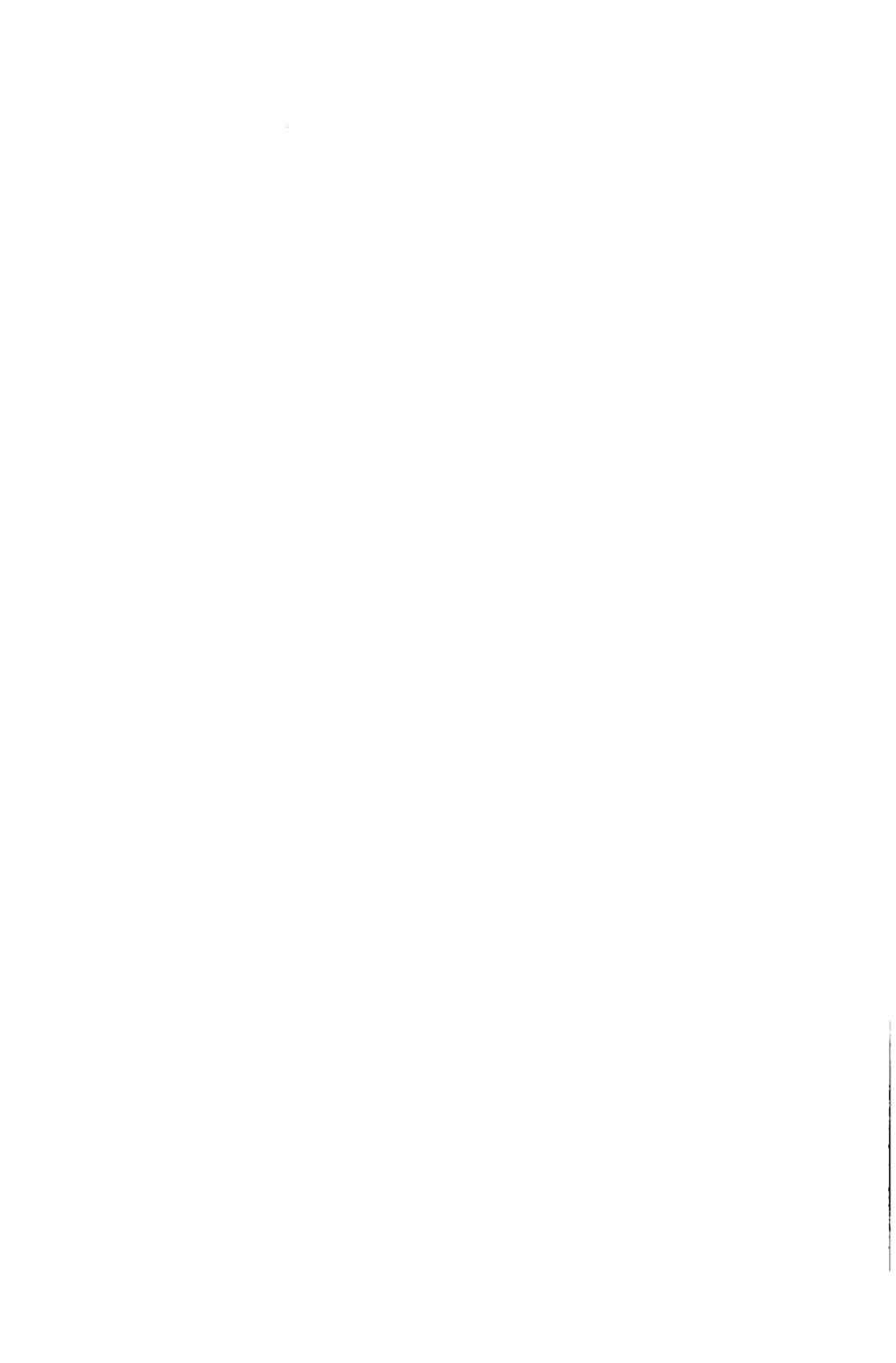




borrowed for
lege of renew-
cents a day is
urn a book on

is open from
except Satur-

DUE





This textbook may be borrowed for two weeks, with the privilege of renewing it once. A fine of five cents a day is incurred by failure to return a book on the date when it is due.

The Education Library is open from 9 to 6.30 every week day except Saturday, when it closes at 4.

DUE

DUE

APR 24 1923

JUL 6 1926

JAN - 5 1949